USAID
FROM THE AMERICAN PEOPLE

INSTITUTIONAL SUPPORT & STRENGTHENING PROGRAM

INSTITUTIONAL ASSESSMENT REPORT

October 2011
This report was produced for review by the United Agency for International Development (USAID). It was prepared by International Resources Group (IRG) for the Institutional Support & Strengthening Program (ISSP).

INSTITUTIONAL SUPPORT AND STRENGTHENING PROGRAM (ISSP)

INSTITUTIONAL ASSESSMENT REPORT

October 2011

TABLE OF CONTENTS

ACRONYMS

AWC	Aqaba Water Company
BOT	Build-operate-transfer
CEO	Chief Executive Officer
GIS	Geographical (or geospatial) information system
GiZ	German Development Cooperation Agency
GOJ	Government of Jordan
HQ	Headquarters
IA	Institutional Assessment
ISSP	USAID Institutional Support and Strengthening Program
JD	Jordanian Dinar
JISM	Jordan Institute of Standards and Metrology
JRSP	Jordan Red Sea Project
JV	Jordan Valley
JVA	Jordan Valley Authority
KPI	Key performance indicator
KAC	King Abdullah Canal
MDG	Millennium Development Goal
MWI	Ministry of Water and Irrigation
NWC	National Water Council
NRW	Non-revenue water
NWMP	National Water Master Plan
O&M	Operations and Maintenance
PMU	Performance Management Unit
PPP	Public-private partnership
SCADA	Supervisory control and data acquisition (system)
USD	US Dollar
WAJ	Water Authority of Jordan
WSAU	Water Sector Audit Unit
WUA	Water User Association
WURC	Water Utility Regulatory Commission

1 EXECUTIVE SUMMARY

The Institutional Support and Strengthening Program (ISSP) is a USAID funded program to support the development and restructuring of the water sector in Jordan, to better meet the challenge of managing Jordan's scarce water resources.

From February to June 2011 ISSP carried out an extensive institutional assessment of the sector, reviewing responsibilities of the Ministry of Water and Irrigation (MWI), the Water Authority of Jordan (WAJ), the Jordan Valley Authority (JVA), and the corporatized utilities who provide retail water services to consumers.

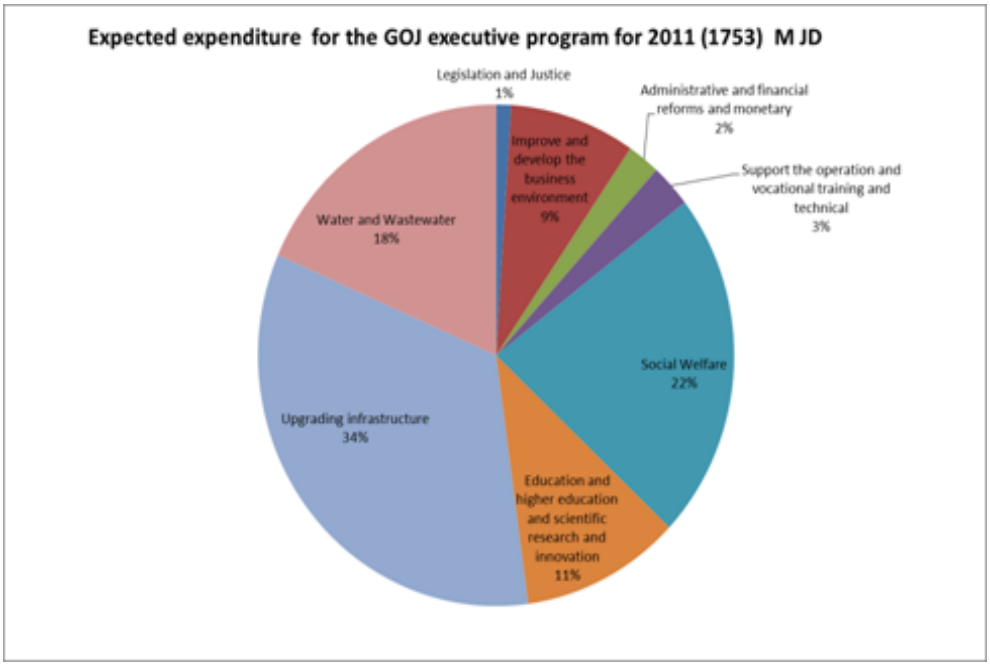
The assessment was built on the larger body of existing work on Jordan's water issues, consultations with key stakeholders throughout and independent analysis as needed. Three sets of changes in Jordan's institutional architecture for water are recommended from this assessment:

1. **Sector restructuring** to:
    a. Consolidate water resource planning and management in the Ministry of Water and Irrigation (MWI);
    b. Create a top-level National Water Council (NWC); and
    c. Focus the Water Authority of Jordan (WAJ) on bulk water supply development and distribution.
2. **Water utility reform** to:
    a. Complete the process of corporatizing utilities;
    b. Improve governance and management
    c. Create an independent Water Utility Regulatory Commission (WURC) to oversee the economic and customer service aspects of fully corporatized utilities.
3. **Water User Association (WUA) strengthening** in the Jordan Valley leading to a shift in tertiary-level water management from the Jordan Valley Authority (JVA) to locally-based WUAs.

Several intractable problems currently confront Jordan and its water sector. The most fundamental of these is the very limited quantity of renewable water resources available to the Kingdom. As noted in the Water Situation in Jordan report of The Ministry of Water and Irrigation in 2009 annual per capita water availability had declined from 3600m3/year in 1946 to 145m3/year in 2009. This problem also emerges, in financial terms, as a large and burdensome annual draw against the national treasury as subsidies are provided by the Government of Jordan in order to maintain low tariff rates. Recurrent

water sector costs constituted about 5% of the 2010 national budget and 17% of the 2010-2013 capital investment program. Finally, the only options on the table for producing completely new supplies of raw water are dauntingly expensive – running to just under 1 JD per cubic meter for water from the Disi aquifer, and more than 2 JD per cubic meter for desalinated water (including bulk transportation costs).

Fig 1.1 A substantial part of Governments budget is allocated to water and wastewater (source: Expected expenditure for the GOJ executive program for 2011)



There are, however, several ways to mitigate the problem of matching the available supply of water and the competing needs for it including:

- demand management;
- reduction of leakage and billing losses in urban and agricultural systems;
- raising the productivity of water used in agriculture—measured as JD of output produced per unit of water consumed;
- reallocation of water among uses;
- re-use of treated wastewater.

Jordan has embarked on some or all of these solutions to differing degrees, and this work needs to be continued, but experience has highlighted a common need for a rational and effective institutional structure from which coherent management solutions can be launched and sustained.

A number of problems characterize the current institutional structure of water governance and management in Jordan including:

- overlapping mandates and separation of related functions, particularly between MWI and WAJ;
- conflicts of interest between different organizations, particularly between WAJ as a bulk water supplier to the water utilities, and simultaneously as an owner and regulator of the same utilities,
- hidden and distorting subsidies, as in the case of below-market electricity tariffs and deferral of asset maintenance in utilities;
- incomplete corporatization of utility governance and management, whereby utilities sometimes experience the worst features of both public and private sector status;
- flawed accountability and incentive systems, as with tariffs levied for both urban and Jordan Valley surface water;
- an overly narrow political foundation for serious debate and decision-making for water policy.

This Institutional Assessment (IA) Report presents the findings of that analysis. Following a process of review and revision involving USAID, MWI, and other important stakeholders, the ISSP will provide ongoing assistance over the next three years to support implementation of the agreed-upon institutional changes. Several important principles guided the IA. These are:

- the importance of incentives and accountability in reforming organizational governance arrangements and management practices,
- the need to minimize or eliminate structural conflicts of interest in relationships among organizations,
- the importance of transparent and broadly based decision-making in setting water sector policy, and
- the importance of crafting institutional arrangements that are robust and not overly dependent on incumbency.

The IA has resulted in an integrated package of recommendations for three sets of changes in water sector institutional arrangements as mentioned above, comprised of the following six critical reforms.

1. Consolidate water resource planning and management functions in MWI. This will strengthen and unify the Ministry's capacity and authority to implement its water resource-related functions.
2. Establish a broadly-constituted top-level National Water Council to review and advise on water policies prepared by MWI. This would create wider cross-sectoral acceptance and support of the policies, thereby insulating MWI from the intense political pressures which surround water permitting, enforcement, and allocation decisions.
3. Refocus the mandate of WAJ on bulk water source development and supply of treated water. This will eliminate conflicts of interest in its dual roles as a bulk water supplier to utilities on one hand, and as owner and regulator on the other.
4. Complete the corporatization of existing water utilities, and establish new ones to cover all communities in Jordan. Corporatization of the major water utilities will enable them to achieve the full potential efficiency benefits of a private sector performance ethic, leading to improved service delivery.
5. Establish an independent Water Utility Regulatory Commission (WURC) to oversee the financial and technical performance of the fully-corporatized water utilities. This will provide the strict independent oversight of the utilities required to drive improvements in financial efficiency and service delivery, identify tariff and off-setting subsidy levels and protect the interests of Government.
6. Establish WUAs to cover the entire irrigated area of the Jordan Valley and build their capacity to manage and fund tertiary-level water distribution. This will focus delivery of irrigation water at local level, increase income to JVA and improve the distribution network as the farmers themselves will be involved in managing these assets. It will therefore relieve JVA of the often-difficult and contentious problem of water delivery to individual farms below JVA system outlets. It will also help pave the way for a comprehensive reassessment of the future role of JVA in the Valley.

The detailed road map for implementing the proposed reforms will be discussed and agreed between the Ministry, USAID and ISSP. As agreement is reached on the specific steps and timing of the activities, ISSP will support implementation and undertake capacity building within these institutions throughout the life of the program.

Reforms can be divided into three phases with the details of each being developed in the action plan:

- Phase 1 – Preparation, including detailed action plans, legal processes, capacity building.
- Phase 2 – Implementation including restructuring of MWI and WAJ, further corporatization of utilities, establishment of new bodies, capacity building, development of processes and procedures, development of a new water law.
- Phase 3 – Consolidation and continued development of the new structures.

Phase 1 is expected to be relatively short in duration with Phase 2 completed within the lifetime of the ISSP project. This will lay the foundations for and achieve significant progress towards the successful restructuring of the sector. Some aspects of the Phase 3 consolidation will be able to be started within the ISSP project timescale.

These proposals raise questions in relation to future ownership of assets, the allocation of existing functions including laboratories, workshops and the well drilling unit, management of capital investments and the longer term role of JVA. These are important technical issues that need to be examined in detail and options prepared for further discussion. ISSP anticipates that these issues will be addressed in the early stages of the implementation phase.

All of the proposed reforms will require either administrative action or legislative change to implement. These changes will be undertaken in three stages. In the first stage, changes which can be accomplished administratively, such as reassignment of functions by WAJ to MWI, will be carried out. In the second stage, amendments to existing laws and By-laws will be prepared which will put in place the structures and powers needed to realize the permanent new organizational structure. Concurrently with this work, the body of amended water legislation will be reviewed and a new comprehensive water law will be drafted to provide a unified and coherent legal framework for the sector.

Successful implementation of this package of reforms would be a significant and important accomplishment for the country. Expected outcomes include decreased conflict among water-using sectors, reduced water losses and unbilled water, increased cost recovery, a reduced burden on the national budget and improved and more efficiently water services provision. The proposed reforms are challenging, but are well within the demonstrated capability of the many highly skilled water professionals in the sector and the Government of Jordan to execute. The ISSP stands ready to support this critical undertaking.

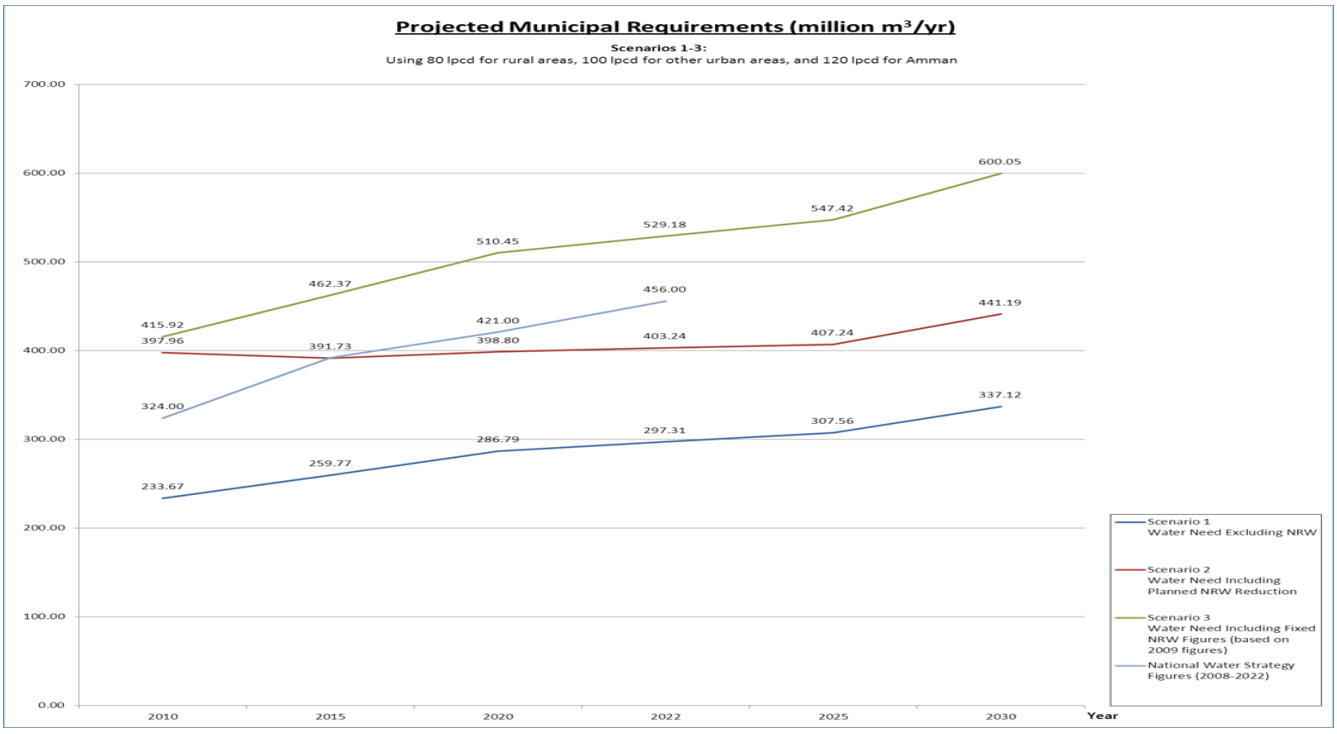
KAC near Wadi Al Arab Dam Pump Station /North Jordan Valley
(ISSP Site Visit, 29 June 2011)

2 BACKGROUND

INTRODUCTION

Jordan is one of the ten most water-stressed countries in the world and is endeavoring to mitigate this serious problem through improved control and use of water resources, better demand management and reducing losses throughout the entire production and delivery cycle. The USAID/Jordan Institutional Support and Strengthening Program (ISSP) is designed to address the widely-held view, as indicated in numerous reports (Annex 2: Bibliography) that current institutional arrangements for managing Jordan's water resources are not adequate to the challenge of the country's long-term, strategic problem: addressing a serious imbalance between sources of water at affordable prices and the demands of a growing population (see graph below) and an expanding economy. In responding to this challenge ISSP builds upon an already impressive volume of work that has been carried out in constructing water sector infrastructure and strengthening sector management to best meet the challenge. An Institutional Assessment (IA) was carried out from February – June 2011 to analyze the institutional framework of the water sector and determine the critical reforms needed to strengthen and improve water sector management. The results of this assessment are presented here.

Fig 2.1 There is increasing demand for limited water supply



ISSP will work closely with Jordanian water authorities to develop the "transition plan" which will detail the specific next steps required to support the water institutions and utilities to implement the IA results. This is what differentiates the ISSP assessment from previous work as shown in (Annex 2: Bibliography) in this area – our "assessment" does not stop at a list of recommendations. ISSP is a three-year program that will work in close partnership with USAID, the Ministry of Water and Irrigation (MWI), the Water Authority of Jordan (WAJ), the Jordan Valley Authority (JVA), water utilities, relevant ministries and Jordanian government institutions, other donors, Jordanian experts, and public and private sector organizations to facilitate and support this sector transformation and strengthening effort.

RATIONALE FOR INSTITUTIONAL REFORM

Jordan's economic future and social stability are threatened by persistent problems in the water sector particularly the decreasing volume of available water as identified in (Annex 1: Jordan Water Balance Projections to 2030), and the increasing costs of abstracting and transporting an already scarce resource across the country. The costs to the Kingdom are no longer acceptable. The financial cost of developing new sources of supply is much higher than current water supplies and the government will be hard pressed to afford them. In addition, current costs of providing water are a growing and an increasingly severe burden on the nation's finances. Large budgetary outlays for the water sector, and the unwillingness to recover those costs from existing or new water users through tariff increases, continue to drain the nation's Treasury. With projected population growth, and with uncertain economic prospects in the region over the coming decade, the harsh fiscal climate in Jordan's water sector will certainly get worse unless concrete actions are taken.

Current bulk treated water supply unit costs are still relatively low when compared to the cost of the planned and other potential new supplies, but current total costs are still burdensome. Estimates are that between 5% and 18% of the national budget is devoted to the water sector in addition to a wide range of other Government subsidies such as reduced electricity costs. When the Disi pipeline[1] is completed, the unit cost of that bulk water will be more than 10 times the cost that Miyahuna currently pays for its bulk water supplies. New desalinated sea water supply is estimated to cost nearly twice that unit cost, and possibly more depending on future construction, interest rate and energy costs. The World Bank Study and the Jordan Red Sea Project (JRSP) show that desalinated water supplies to Amman will cost at least 2 JOD/m^3, even with a big grant component in the JRSP. The up-front costs for either the Jordan Red

[1] Currently scheduled for 2013

Sea Project (JRSP) or Red-Dead projects are estimated at over USD 10 billion. The financial benefits in delaying the development of such new sources are substantial, provided that Jordan is able to utilize its current resources more efficiently during that period.

The necessary solution to these dual threats—burdensome current budget outlays and unaffordable new supplies—is to undertake targeted institutional reforms within the water sector. These reforms concern how water is governed in Jordan and water and wastewater systems are organized. This addresses both the processes by which sustainable water policies are formulated and the processes by which those policies are implemented. While the ISSP is not the first assessment to identify persistent governance problems in the sector, it is hoped that given the growing severity of water problems in Jordan, coupled with ISSP's support and other donor programs to facilitate reforms, real progress will be achieved.

The ISSP project therefore focuses attention on three main governance components of the sector:

- organizations;
- administrative processes;
- behavioral incentives that arise from these structures and processes.

The concern is that clear rules and plausible incentives are in place to ensure that policy directives will be carried out. The necessary organizational components need to be logically and administratively connected to provide clarity of mission and accountability. Lines of authority must be clearly spelled out and followed. Incentives need to be carefully structured to motivate management and staff and reward good performance in addition to strengthening demand management and reallocation, together with consideration of further resource exploitation which is likely to be very costly. As such, a proper diagnosis of the water sector must be concerned with both organizations and processes—structure and function. Jordan's population has shown that it will adjust to physical scarcity but there is little tolerance for scarcity that is perceived to be the result of flawed policies and dysfunctional administrative processes.

INSTITUTIONAL ASSESSMENT PRINCIPLES AND PROCESS

There are several core principles underlying the IA:

- Institutional reforms need to create more powerful incentives and mechanisms for better and more efficient water sector performance.

- Efficient utilization of existing water supplies must be linked with decision-making on new supply options in an integrated policy making and strategic planning process.
- Policy and allocation decisions must be more transparent and involve a broad range of key stakeholders.

The IA team extensively analyzed and built upon the large body of experience, work, assessments and other studies carried out to date on water issues in Jordan (Annex 2: Bibliography and Annex 3: Annotated Bibliography of Key Materials). It also critically examined the institutional arrangements and governance structures and systems now in place. This process helped to identify the factors underlying the key constraints and barriers—legal, regulatory, structural and operational—to optimal management of scarce water resources. Institutional arrangements and governance structures and systems now in place for the key institutions were assessed, especially for strategic planning; water abstraction and production, water allocation, distribution and protection; management, quality and quantity monitoring, infrastructure investment, and operations and maintenance (O&M).

The team reviewed the specific mandates and functions both within and among the key water sector institutions. This was used to help determine where there is need and realistic opportunity for reorganization, realignment, restructuring or changes in approach and/or systems to better enhance efficiency, equity, and transparency objectives, and to assure clarity of responsibilities. The recommendations presented below were then developed in the context of GoJ policy, priorities and intentions for the water sector as informed by regular consultations, the National Agenda, the National Water Master Plan (NWMP), and "Water for Life".

ISSP recommendations primarily concern changes in the organizational structure of Jordan's water agencies and utilities. We focus particular attention on the necessary behavioral incentives within and among key water sector institutions to improve the financial performance of all segments of the water sector. We offer recommendations concerning improved licensing arrangements, enhanced enforcement policies and mechanisms, and regulatory approaches. This is accompanied by a legal review which identifies important gaps and limitations in the existing legal framework and highlights the key areas and cases in which existing laws ought to be modified or new laws introduced.

ACHIEVEMENTS

In order to assess how best to keep Jordan's water sector moving forward it is important to understand the progress made to date. The Kingdom has made significant achievements in water sector management, especially in terms of integrated water and wastewater management. Infrastructure improvements over recent years have increased water availability to urban areas and agriculture and improved the treatment of wastewater.

Jordan has made significant achievements in meeting the Millennium Development Goals (MDGs) for water and sanitation. More than 98% of the population are connected to the municipal water systems throughout Jordan and have access to clean water, and about 65% are connected to the sewers network. By international comparisons, Jordan is very advanced in the joint management of water and wastewater. For example, the development of water supply systems to meet the growing demands in Amman was accompanied by wastewater collection and treatment systems to take treated wastewater back to the Jordan Valley for reuse. It is reported that some Jordan Valley farmers prefer As-Samra treated effluent to traditional surface water supplies. This is a major success, as a decade ago the idea of using treated wastewater for agriculture was a "taboo" subject in Jordan.

In the Jordan Valley, the introduction of water users associations (WUAs) since 2001 is a clear success that has resulted in higher efficiency and the perception of greater fairness in distribution. These associations are progressively assuming the tertiary-level water management previously undertaken by the JVA. As of 2010, about 80% of irrigated land in the Jordan Valley is covered by WUAs. Other examples of water use efficiency improvements over the past decade include using treated wastewater from the Wadi Musa and Aqaba WWTPs for non-consumable crop irrigation and industry. This has contributed to the Aqaba Water Company's (AWC's) financial soundness (sales of the treated wastewater blend are at higher prices than domestic retail prices) with increased potable water supply by substituting treated wastewater for potable water and a greater contribute to Jordan's economy by supporting industry.

Private Desalination Treatment plant at Kufrain/ Middle Jordan Valley
(ISSP site visit, 06 March 2011)

Possibly the most important improvement in water utility management in Jordan was the corporatization of the Aqaba, Amman and Yarmouk water utilities. AWC is able to deliver mostly continuous water supply to its customers through a relatively new network, using good network management practices and modern technology such as GIS and SCADA. Another important outcome of the AWC's good management practices is achieving the lowest non-revenue water (NRW) percentage in Jordan and at the same time providing a continuous supply. NRW in 2005 was reported to be 27.5% reducing to 21% in 2009 with the average figure for Jordan as a whole being 43.13% in 2009, according to WAJ reports.

There has been recent success in opening up European markets to Jordanian agricultural producers through water sector collaboration with the Jordan Institute of Standards and Metrology (JISM) whereby standards for marketing and good agricultural practices were established. These efforts resulted in a 900% increase in the number of European-certified farms in Jordan since 2003. The water sector

continues to work with JISM to develop plumbing standards and technical regulations for efficient water use. So far, standards for faucet flow rate regulators and toilets have been approved, which will eliminate non-compliant fixtures from the Jordanian market over time.

Other water demand management initiatives include working with small rural communities to encourage them to adopt systems such as rainwater harvesting cisterns and reservoirs, greywater recycling, rehabilitated household water networks to fix leaks, and drip irrigation systems. These good practices are supported through revolving credit funds managed by the local communities (135 revolving credit funds were established that provided 4,050 loans by December 2010), and by promoting citizen participation and increasing understanding among communities on the role that they can play in improving water use efficiency at the local level. Like all efforts aimed at changing Jordanian attitudes to water conservation, the effects have been positive in a few locations, but remain to be scaled up to the macro level.

A start has been made to address the problem of groundwater overuse by establishing and empowering a groundwater monitoring unit within WAJ. Many illegal drill rigs have been confiscated and reportedly almost all of the legal wells in the country now have meters that are being monitored. Although previously illegal wells have not been shut down, they have been licensed to facilitate more effective monitoring and control of abstraction. However, the efforts to date, while necessary enabling steps, have not by themselves resulted in reduced groundwater pumping, an issue that needs to be tackled at the highest levels of the Jordanian government by strict enforcement of licenses.

Despite these achievements, much more remains to be done. Many of the above successes can be considered successful at the pilot scale, but are insufficient to solve Jordan-wide problems because they require behavior and incentive changes as well as funding. Success will increasingly depend on support from the Government of Jordan in a broad sense, as well as from water users and stakeholders outside of the water sector. The challenge for the Government and water utilities is that new infrastructure investments are becoming too costly in both capital and operating costs to continue to provide an easy solution to meeting growing demands. Jordan must look instead at how to realize savings and efficiencies from the existing systems through institutional and structural reforms.

INSTITUTIONAL CHALLENGES

Significant achievements are still to be realized in the areas of demand management, non-revenue water (NRW) reduction, increased water productivity, reallocation and reuse. Each of these areas requires

improved policy setting, different investments, levels of support and capacity for proper implementation. The one thing that they all have in common, however, is that they all require a sound, efficient management and oversight structure to implement them.

The current structure of the water sector is characterized by:

- overlapping mandates, roles and responsibilities;
- conflicts of interest;
- hidden and distorting subsidies;
- previous reforms only partially implemented; and,
- flawed accountability and incentive systems.

The table below highlights the challenges facing the sector

Institutional Challenges	Areas for Improvement		
	Overall Structure	**Management and Oversight of Water Utilities and Bulk Water Supply**	**Delivery of Tertiary-Level Water in the Jordan Valley**
Overlapping mandates, roles and responsibilities	**X**	**X**	
Conflicts of interest	**X**	**X**	**X**
Hidden and distorting incentives	**X**	**X**	**X**
Previous reforms only partially implemented	**X**	**X**	**X**
Flawed accountability and incentive systems	**X**	**X**	**X**

The IA team identified three main areas in which there are significant institutional challenges that can be addressed by a package of institutional reform, restructuring and support. First is the overall structure of the water sector which currently constrains sound policy development, strategic planning and integrated water resources management. The second area is management and oversight of water utilities and bulk water supply. The third area is the delivery of tertiary-level water in the Jordan Valley.

STRUCTURE OF THE WATER SECTOR

The water sector is currently structured in such a way that essential water-related functions continue to be spread among WAJ, MWI and JVA. This creates several areas in which there is duplication of effort, unclear responsibility for decisions, and poor accountability. Also, due to the way in which MWI was created (through a By-law rather than a dedicated law), it lacks sufficient authority to effectively carry out its water management responsibilities. One result of this is that control of groundwater abstraction is

weak. There are significant conflicts of interest between WAJ responsibilities for bulk water supply and its oversight and management controls over the utilities. Policy decision-making is narrowly-based and focused almost solely within the Ministry. In addition MWI has a conflict of interest due to its dual responsibility for both policy decision-making and policy implementation. There is no viable mechanism for monitoring and follow-up in policy implementation. There is also a lack of good shared data and information to provide the basis of informed policy and management decisions.

MANAGEMENT AND OVERSIGHT OF UTILITIES

The management and oversight structure for utilities, bulk water supply and regulation needs urgent reform that must be addressed through restructuring and institutional support. Currently, most utility service is inadequate – as shown by the lack of continuity of supply, particularly in Amman, and high levels of NRW. Utility operation is inefficient and expensive and yet the asset base is deteriorating because insufficient resources are being allocated to maintenance and upkeep of the systems. There exists a fundamental and significant conflict of interest in that WAJ can exert management oversight and control over the same corporatized utilities for which it is the bulk water supplier. As such, the utilities need to be separated from WAJ ownership and control while creating a mechanism which still respects the government's concerns over both protecting the large asset base developed and invested in by the GOJ and also with regard to their responsibility for providing an essential public service.

WATER USERS ASSOCIATIONS (WUAS)

In the Jordan Valley, tertiary-level water distribution is inefficient with widely variable local capacity levels. The JVA has been working to devolve responsibility for distributing water among farmers to a set of farmer-based Water Users Associations (WUAs) that would cover the entire irrigated area of the Valley. However, this work is incomplete and needs to become a top priority. There are also concerns that the overall organizational capacity of JVA has not been adequately adjusted for its transition from being a multi-sector regional development organization to a regional water supplier and manager.

3 INSTITUTIONAL ASSESSMENT RESULTS

This chapter presents the main results of the ISSP Institutional Assessment (IA). It is organized into six sections. These sections each highlight the critical reforms that will have the strongest impact on some of the most significant challenges facing Jordan's water sector. These sections provide a detailed explanation and rationale for why reform or restructuring is being proposed and details the key benefits and features of the recommendations.

Chapter Four: Implementation plan structure and functions presents the outline of the implementation plan and organizational charts which graphically depict what the proposed restructuring is expected to look like. These are accompanied by a matrix which shows how the IA proposes that water sector policy, management and oversight functions are allocated among the key institutions.

Finally Chapter Five: Legal Implications presents an overview of the legal implications of the proposed package of restructuring and reform.

Kufrain Dam / Jordan Valley

Site visit, 06 March 2011

3.1 CONSOLIDATE AUTHORITY FOR WATER RESOURCES (WR) PLANNING AND MANAGEMENT FUNCTIONS IN THE MINISTRY

OVERVIEW

Consolidation of authority for water resource planning and management within the Ministry of Water and Irrigation (MWI) is recommended to rationalize the sector's organizational structure, correct overlapping mandates, redress divided responsibilities for closely-related tasks, unify related functions, and separate sector-wide planning and management functions from bulk water supply and service delivery functions. In addition, the authority of the MWI needs to be strengthened to a level commensurate with its sector-wide water resource planning and management mandate. The initial phase of restructuring would be implemented using existing powers of delegation in the Water Authority Law and the Ministry By-Law. At the same time work would begin drafting modifications to underlying legislation and any relevant new legislation to codify these changes. It would be coupled with an internal reorganization within the Ministry and a comprehensive capacity building effort supported by ISSP.

RATIONALE

The existing primary water sector organizations in Jordan were created at various times and through different mechanisms. Approximately 30 years ago, a number of single purpose organizations were merged into two new authorities – the Jordan Valley Authority (JVA) in 1977 and the Water Authority of Jordan (WAJ) in 1983. This streamlined the administrative structure and improved coordination among the newly consolidated activities within each Authority. However, because both were established as financially and administratively independent organizations, there was no structure for coordinating between them or for strategic planning and management of the water sector as a whole. This led to the creation, in 1988, of the Ministry of Water and Irrigation (MWI) as an umbrella organization to develop and implement water policies and strategic plans at the sector level and to manage the nation's water resources. At the same time, the governance arrangements of the two Authorities were adjusted to link them administratively to the Minister of Water and Irrigation[2].

[2] See *A Report Regarding Re-structuring Water and Irrigation Sector* prepared by the Ministry of Public Sector Development, and Annex 7 (legal) for details on the history and the associated legislation respectively.

While this structure gave the sector a more rational overall structure, two basic problems arose from this sequence of organizational developments. First, the legislation creating MWI assigned to it a number of water resource planning and management functions which had previously been assigned to WAJ in its earlier law. Second, MWI was established under WAJ By-law while the two authorities were both created through laws passed by Parliament[3]. Because a law has greater authority than a By-law, this difference created ambiguity in the locus of responsibility for duplicated functions in WAJ and MWI.

PROPOSED REFORM

In order to deal with the challenges referred to in the previous section reforms are proposed that will:

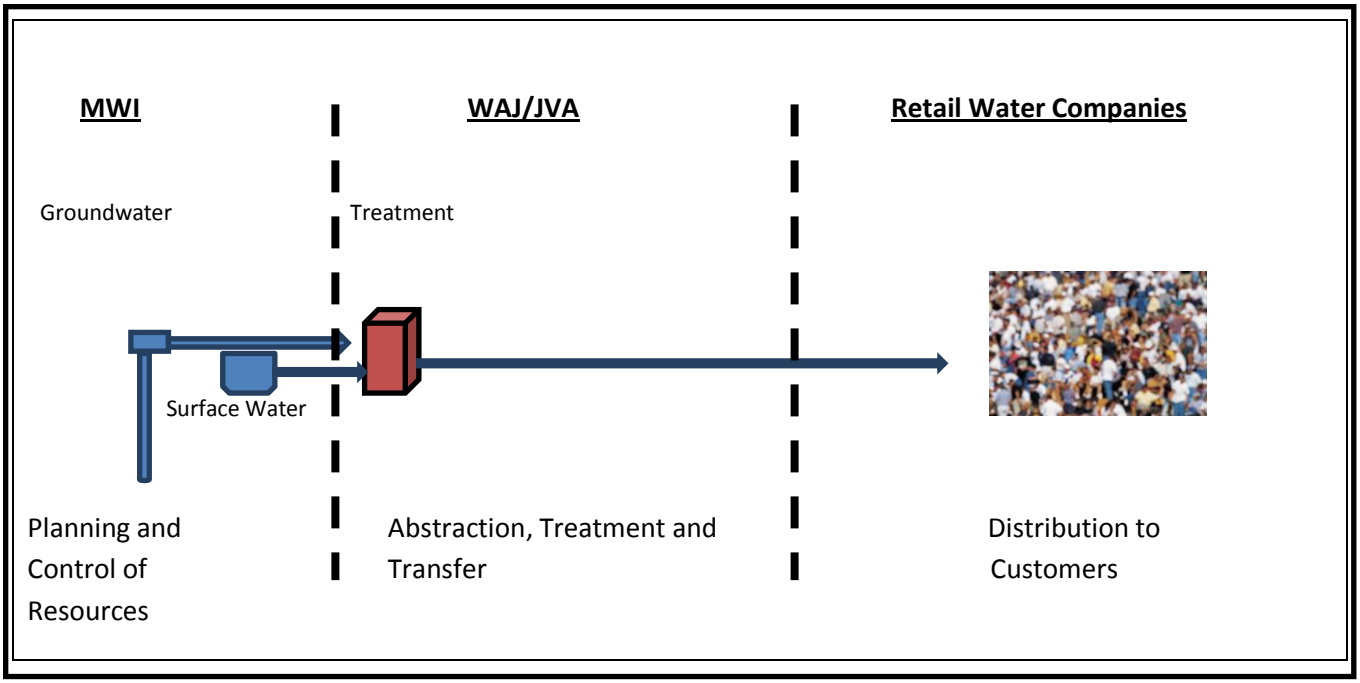
- Eliminate the duplication in responsibilities assigned under existing legislation to both WAJ and the Ministry;
- Consolidate functions in the same organization which are inter-dependent, such as water resource planning and water data collection and analysis;
- Separate resource planning and management functions from bulk water supply functions to eliminate conflicts of interest, as in, for example, well permitting and groundwater development, which must be separate; and,
- Strengthen MWI authority to a level commensurate with its sector-wide water resource planning and management mandate.

ASSIGNMENT OF RESPONSIBILITIES

Below the policymaking level, water sector responsibilities can be broken down into three broad primary groupings: (1) water resource planning and management (2) bulk water supply, and (3) drinking water and irrigation service delivery. Under the proposed framework, the first group of functions would be assigned to the Ministry, the second to WAJ and JVA, and the third to corporatized utilities (in the case of municipal water supply) and autonomous locally-based Water Users Associations (WUAs) (in the case of Jordan Valley irrigation).

[3] A law is approved by the Cabinet and then enacted by the Parliament and signed by the King. A bylaw follows the same process through Cabinet approval but is not then submitted to Parliament for passage. Rather, it is enacted pursuant to authority existing in a previously-passed law.

Fig 3.1.1 Proposed responsibilities for water management



Major functions which are to be the responsibility of MWI under this framework are detailed below:

- Preparing and updating water sector policies and plans for review by the National Water Council[4] (NWC) ahead of submission to the Cabinet, including water allocation policies and major water issues.
- Implementing approved sector policies and plans, including assigning responsibilities among organizations, coordinating activities, and monitoring results.
- Developing and updating a strategic plan for the sector to include documenting current supplies and uses and estimating the future supply of and demand for water; and plans for matching the two.
- Drafting legislation, regulations, and standards related to the water sector.
- Issuing licenses and permits for water abstraction and use, subject to approved water allocation policies and the limits imposed by available and projected supplies.
- Ensuring compliance with terms of water abstraction licenses and permits and taking enforcement action against violators.

[4] The National Water Council is proposed as part of this restructuring plan, see Section 3.2.

- Ensuring the quality of ground and surface water resources, including treated wastewater and regulation of nonpoint sources.
- Coordinating demand management actions at the national level.
- Collecting, storing, and analyzing water sector data and coordinating water-sector data collection and analysis activities among ministries.

Certain aspects of most, if not all, of these functions are currently within the mandate of MWI, though some are incompletely elaborated and a number are also under the mandates of other sector organizations. The overlap between MWI and WAJ is particularly extensive.

It is recommended that all responsibilities relating to these functions which are currently assigned to WAJ by existing legislation be reassigned to MWI[5]. In addition, where there is water-related data collection and analysis responsibilities that are shared with other ministries, such as Health or Environment, MWI should be empowered to coordinate and harmonize those activities with its own data analysis activities.

Under this proposal WAJ will be responsible for bulk water supply to utilities, water and wastewater treatment, and development of new sources of supply and new treatment facilities. These responsibilities are discussed in more detail under the recommendation on reorganizing WAJ (Section 3.3).

OUTSOURCING AND CAPACITY BUILDING

An ongoing issue within the MWI is the difficulty it experiences in hiring and retaining qualified technical staff. Newly created units of MWI will be able to access capacity building support under the ISSP which could consist of individual training for MWI staff and reassigned WAJ staff, and on-the-job training through jointly-executed tasks. As an example, ISSP could support the Ministry in developing a strategic plan for expected future water supplies and needs.

However it is recommended that, during the process of restructuring, the MWI make a careful effort to identify specialized services which could be outsourced to private vendors under a retainer arrangement. Although the cost structure of the private vendor may be higher than that of MWI, the overall benfits of outsourcing including higher quality of service, flexibility to draw on outsourced services on an as needed basis, and staff development and training costs avoided, may be greater than outsourcing costs.

[5] In addition, the responsibilities of the JVA to issue permits for wells within the Jordan Valley should be transferred to MWI so that this function becomes fully consolidated.

STEPS TO IMPLEMENT

Basic steps necessary to implement this recommendation include:

- Agree on a list of functions to be reassigned from WAJ to MWI (2011).
- Undertake urgent legal review to ensure that the reassignment process can be carried out (2011).
- Complete re-assignment agreement (2011).
- Reassign agreed-upon functions from WAJ to MWI on an interim basis, using delegation powers already extant in the WAJ law; this will require cabinet approval. (2011).
- Devise revised organizational structures for MWI to accommodate the new functions. (Early 2012).
- Develop position descriptions for key posts in MWI under the new framework and reassign personnel to support transferred responsibilities (2012).
- Training and capacity building support to departments within MWI affected by the transfer of responsibilities (2012 -2013).
- Review legislation to identify places where changes in assignment of responsibility are required(2011-2012).
- After one year, assess the progress of the reforms and make any needed adjustments to the new structure and the outsourcing and capacity building program (2012 – 2013).

3.2 ESTABLISH A NATIONAL WATER COUNCIL

OVERVIEW

Establishment of a National Water Council is recommended to provide a platform for more comprehensive review and comment on serious water policy decisions which have a direct impact on the economic development and social stability of Jordan. National participation is needed to face the challenges that lie ahead for the water sector in Jordan and a National Water Council will provide the opportunity for dialogue and debate between those groups with competing demands for water and a large stake in water policy. This body is in line with overall government thinking which encourages broader participation in national decision making processes, a policy which is particularly important when it involves such a sensitive social issue as water.

The National Water Council would represent key stakeholders, including relevant Ministries, business and industrial interests, the agricultural sector and civil society. In this way, leadership representing each of these interests would have the opportunity to advocate for, and to defend, their positions on water policy against competing interests and needs, also represented amongst the Council membership. It also ensures that difficult decisions about how to supply the water Jordan needs are discussed openly and with the broad range of input needed to allow government to make the best decisions possible. Thus the Ministry's water policies and strategies, which although developed based on the technical knowledge and sound water management practices embedded in the Ministry, would have a much more solid and authoritative base, leading to wider overall acceptance, and a shared responsibility between the Ministry and the Council.

RATIONALE

The Government of Jordan (GoJ) is faced with the challenging task of protecting and managing scarce water resources which are needed in ever-increasing amounts by its people, industries, energy generation, and agriculture, to meet the demands of a growing population, urbanization, and a range of economic activities and development schemes (Annex 8: Maps). However this potential demand far exceeds the water supplies currently available for distribution. Requests for water can be highly political in nature, which the Ministry then has to balance against its technical knowledge of the limits of Jordan's water supplies and its management responsibility to protect these supplies. This situation is exacerbated by the

fact that Jordan's economic and social climate necessitates charging artificially low prices to domestic and agricultural consumers, forcing the water sector to operate at a deficit, subsidized by the national budget.

What this means for the country is that the water policy decisions required of the MWI, and the GOJ more broadly, involve difficult trade-offs between competing priorities and economic, social and political interests. They also come at very real costs to public finances due to the high levels of direct and indirect subsidies, as well as to the integrity and long-term viability of Jordan's water resources. For example, the large allocations of water to the agricultural sector, often used at relatively low levels of productivity, come at the expense of urban and industrial supply, with serious implications for both the total cost of supplies to the Kingdom and the required subsidy levels by the national budget. Clearly some of this allocation is essential for social and political reasons so that water allocations are sometimes made to address vital national interests and abate social stability concerns.

PROPOSED REFORM

ISSP proposes that a cross-Ministerial and multi-sectoral National Water Council be established within the year. Its mandate will be to debate, review and comment on sector-wide water policy and strategic planning on an annual or semi-annual basis and to review the progress of water policy implementation annually. The Minister of Water and Irrigation and MWI would still be wholly responsible for the development and implementation of the Kingdom's water policy however the establishment of a Council would introduce new and much-needed support to the water policy process which is detailed below.

- ***Provide a forum for debate on the national water policy and strategy among key stakeholders***. The Council will give the Ministry a broader forum in which to present its case, enabling it to gain broad support and to take into account concerns of the stakeholders, prior to submission to the Cabinet. Costs and benefits of major water decisions, whether embarking on a mega project for water supply or devising plans for reallocating supply in times of critical need would be openly debated and explored. Demand management strategies applied to specific sectors, or the nation as a whole, are also examples of issues needing broader consensus and action. Any stakeholder that wanted allocation levels different from the Ministry's proposed policy would need to make their case not just to MWI but to the Council as a whole, many of whose members are either competing for those same resources or would have to bear their financial burden, or both.

- ***Introduce greater transparency***. Water policy and strategy decisions come with significant trade-offs, costs and financial, social and political implications which need to be understood and accepted by the key stakeholders across government, key industry groups, and civil society.
- ***Establish Critical Role in Policy Setting***. The Council will create a new but critically important role in the water policy process. It will review and comment on water policy and strategy proposals and will monitor implementation. This ensures that all relevant Ministries and key stakeholders debate and understand the financial, social and political trade-offs the government, and specifically MWI, has to make every year to supply water to the people, agriculture and industries of Jordan. MWI would retain its rightful and legal responsibility and authority for the development and implementation of Jordan's annual water policy and strategy, long-term strategic planning for water, and crisis allocation decision-making. In fact it is essential that the Ministry continue to strengthen its ability to develop and propose appropriate and responsible evidence-based water policies.
- ***Strengthen the Ministry's ability to carry out the agreed water strategy and allocation decisions***. The Council's support will be a powerful endorsement of the Ministry's strategy and will give the Minister further recourse for compliance with policy implementation. It also provides for a greater ability to deny allocation requests made outside of the MWI policy development process.

BENEFITS

The National Water Council would be the essential structural mechanism whereby discussions and debates about water policy would be elevated to the highest levels of government authority but with the transparency and accountability that has been missing in the water sector previously. Establishing and empowering a Council would send the right signal to the people of Jordan, as well as to other areas of government, that water is indeed an issue that needs to be a part of the national policy debate and is of critical national importance. The Council will achieve the following:

- Broaden the decision-making process.
- Increase legitimacy of water policy to the public and raise the profile of water as a critical national issue.
- Create buy-in for water policy and strategy decisions and invest these decisions with added weight and authority.

Broaden the Decision Making Process. As discussed above, a Council needs to bring debate and discussion concerning national water policy and strategy into the public eye where interest groups and stakeholders can observe and participate in these important transactions. These issues are of national magnitude and need a national discussion. This not only results in better decisions by the relevant authorities but in much greater public confidence in those decisions. Water is an integral part of national policy and development plans for most sectors of society. But because of its scarcity in Jordan, water allocation, both current and planned, has to be balanced between the various economic sectors vying for the same resource. This "competition" needs to be debated at the national level so that the trade-offs and costs associated with water strategy are an integral part of Jordan's national policy and strategy.

Increase Legitimacy of Water Policy and Importance of Water as a National Issue. With a Council, the dialogue on water is extended to all sectors of society which are currently outside of the government policy framework. In addition to the benefits presented above, the IA team feels strongly that the impact of a Council would go beyond key support to policy making. It would also start affecting the behavioral patterns of individuals, industries, farming, ministries, municipalities or even visitors to the country. This is because there would be a much more broadly-based understanding of the impacts of Jordan's water problems.

Create Buy-in and Shared Responsibility. The Minister and MWI will be at the heart of the National Water Council, central to its existence and operation. Further, MWI would provide the secretariat and technical support for it. The IA team feels strongly that a Council will be a powerful tool for the Ministry when constituted properly with the right rules and mandate as described above, with membership comprised of key water sector stakeholders from government, civil society and the private sector. The reason for this is that the Council's support of Ministry policy then carries with it the authority of central government and the added endorsement of the people, businesses and constituencies most affected by water policy. This significantly strengthens the Ministry's position in its day-to-day job of implementing and defending the national water policy. It also validates the technical authority of the Ministry to manage and protect Jordan's threatened water resources.

FORMATION OF A NATIONAL WATER COUNCIL

There are different viable options for the formation of the National Water Council and where it sits within the broader organizational structure of the Government of Jordan. Regardless of this, however, the following are key considerations for the Council.

Representative. Council members should be comprised both of current government officials and of the primary affected parties in Jordanian society. Members need to be representative of the broader interests of their sector or constituency. For the Government of Jordan, a Council must include the leadership of the key Ministries which are involved directly and significantly with the water sector such as water, finance, agriculture, energy, environment, health, industry and trade, tourism, etc. Municipal interests must also be represented. Private sector representation should be structured to ensure that key industry, business, and commercial interests are represented, but without overwhelming the size and operational effectiveness of a Council. For example, only key industries or business advocacy groups should be included that could speak for a wide platform of interests, such as trade associations, the Chamber of Commerce, and farmer groups. Civil society representation should include interests most directly affected by water issues and should recognize the role that women play in water use and conservation as well as academic leadership in Jordanian water issues. The exact number and identity of Council members is to be determined as rules and procedures are developed.

High Level of Leadership. The higher the level of leadership for a Council, the signals it sends will have more impact to broader society and government. As discussed above, a high level of leadership also invests the support of the national water policy and strategy with the requisite authority. Therefore it is proposed that the Council be established through Prime Ministerial decree, giving it the authority of this senior office. Additionally the chairperson and members of the Council should be highly respected people within their field.

Meets at least Twice a Year. With at least two meetings a year, the water policy debate takes place often enough to discuss any critical adjustments necessary as conditions change throughout the year or develop far differently than projected. The level of input required ensures that membership on the Council is not a burden for its members, all of whom would hold important leadership positions.

Clear Mandate and Procedures. It is essential that the Council is properly established with a clear mandate and a constitution that sets out its duties and responsibilities. The constitution and procedures need to be developed so that the Council cannot delay development and implementation of policy, and as such no quorum should be set for the meeting to be held. To ensure that the views of the Council carry proper weight and are fully considered in the decision making process, MWI will be required to submit the results of Council's reviews to Government in a timely manner. ISSP proposes that the MWI provides the secretariat for the Council and is therefore responsible for setting meeting dates, ensuring that members are informed, preparing agenda (in conjunction with the Chairperson) and preparing

minutes of the meeting. ISSP will support the Government in preparation of the constitution and the procedures of the Council. Where appropriate ISSP would also provide technical support and capacity development for non-governmental members.

CONCLUSION

The IA team concluded that creation of the National Water Council is a vital component of needed water sector reform. It will greatly strengthen water policy development and provide critical support to the Ministry of Water and Irrigation in the execution of its mandate to protect and manage Jordan's water resources in the future. The Council will elevate the debate over water strategy to the national level and broaden the decision making process. It also sends a powerful signal to the people that water is indeed an issue that the government takes very seriously and for which it is doing everything possible to ensure requisite supplies are available for immediate needs and long-term goals. The IA team explored several options, based on both existing models and similar institutions within Jordan as well as alternatives in use elsewhere. It is the opinion of the ISSP that the four core criteria for the formation of a council presented above must be met.

STEPS TO IMPLEMENT

- Establish National Water Council by Prime Ministerial decree (2011).
- Develop rules, procedures, membership criteria and format (2011).
- Invite members, establish secretariat (2011).
- Convene initial meeting (early 2012).
- Formalize rules, procedures, membership criteria and format for inclusion into new legislation to fully establish and empower NWC (end 2012).
- On-going capacity building and technical support (2012-2013).

3.3 REORGANIZE WAJ AS A BULK WATER SUPPLIER

OVERVIEW

ISSP recommends unbundling of the water value chain to reorganize the Water Authority of Jordan as a bulk supplier of potable water to individual retail utilities, a role that would include development of new sources approval by the Ministry of Water and Irrigation. This will remove conflicts of interest, focus WAJ on its core function, focus MWI on resource protection and management, remove WAJ from management and control of utilities and allow clear identification of costs of water supply.

The success of this recommendation is contingent upon the implementation of the full package of reforms including full corporatization of the utilities and the establishment of the independent regulator.

Under this recommendation it is proposed that the independent regulator establishes the price of bulk water at the entry point of the utility. This will be based upon tariff rates (for retail water) set by Government (following advice from the regulator). Government would then provide WAJ with funds to cover the difference between the price paid by the utilities and actual costs of production and delivery to the entry point. A similar approach is followed for wastewater plants that receive sewage from more than one utility. These plants will be operated by WAJ directly or through contracts with private operators and charges applied to the utilities as recommended by the regulator. The scheme is part of an overall plan that would make subsidies more transparent and encourage WAJ to concentrate on its core business of source development, supply of bulk water, and management of relatively large wastewater plants that fall outside of a utility's operations.

RATIONALE

The Water Authority of Jordan currently performs four primary functions related to both water resources management and water service delivery which are retail water supplies and sewage services, planning and development of water resources, provision of bulk water and wastewater treatment. It is proposed to unbundle the value chain by transferring two of these functions to the MWI, allowing WAJ to focus on its critical core functions – bulk water supply and new resource development. This would eliminate conflicts of interest among its roles, separate regulatory and service delivery functions, and provide for a single point of subsidy for Government in relation to urban water services.

RETAIL WATER SUPPLY AND SEWERAGE SERVICES

These services are currently organized as individual utilities that follow the administrative boundaries of the various governorates. It is the recommendation of this program that utilities be consolidated geographically and divested to become corporatized entities operating under an independent water utility regulator (see the following Section 3.4). This divesture adheres to a reform policy adopted several years ago – a policy which was begun but not yet completed. The two utilities divested in the early 2000's were Miyahuna Water Company and the Aqaba Water Company, and in 2011 a further company, Yarmouk, supplying the northern governorates was established. All three companies are owned by WAJ (although in Aqaba 15% of the shares are owned by the Aqaba Development Company) and are also regulated by WAJ.

JVA and WAJ in the bulk supply context

JVA is also a bulk water supplier providing water for irrigation in the Jordan Valley and raw water for domestic use, given to WAJ at Deir Alla, along the route of the canal. Its sources are both groundwater (Mukhaiba Wells) and surface water from the Yarmouk River which is shared with two neighboring countries, and from reservoirs it constructed through the years for harvesting water in the side wadis to the Jordan River. A substantial portion of this harvested water comes from treated effluent of wastewater facilities. It is envisioned that bulk supply responsibility and storage reservoirs will eventually be assigned to WAJ.

PLANNING AND DEVELOPMENT OF WATER RESOURCES

It is recommended that WAJ retains responsibility for development of water resources (following approval from MWI) and that responsibility for water resource planning and management is transferred to MWI. This will avoid conflicts of interest between regulation and operational needs and between exploitation and protection of the water resource. This recommendation was first made before the Ministry was established in 1988 but was only partially implemented at the time the Ministry was created. It has subsequently been recommended by a number of other studies.

PROVISION OF BULK WATER

This is currently done through several mechanisms. One is the production and conveyance of water to and within Governorates. An example of this is the Khaw groundwater well system. Another mechanism is the arrangement with JVA for raw water provision. This water is conveyed by WAJ in its raw state, treated and conveyed onwards to different governorates. This is the case of the Deir Alla-Zai system. A third mechanism is to contract with a private firm for both production and conveyance, as is the case with the Disi water. In all of these cases, water of potable quality is delivered by WAJ to the individual retail utilities for further distribution.

WASTEWATER TREATMENT

Collection of sewage is invariably undertaken by the local utilities. A major treatment plant at As Samra receives influent from several Governorates serving nearly half the population of the country. The wastewater is treated to a specified quality by an independent operator under a BOT contract. Plans are underway to substantially expand this facility. Output from the plant, of specific quality standard, is discharged into the Zarqa River to ultimately become part of the bulk irrigation supply for the Jordan Valley. It is the Government's policy to centralize major wastewater treatment plants in order to balance the exchange between fresh water taken from agriculture and industry, particularly in the Jordan Valley, with the treated effluent of a quality suitable for the intended irrigation use. WAJ thus acts as a wastewater wholesaler for these centralized facilities.

OTHER ACTIVITIES

WAJ also undertake other functions, but they are of a support nature. These include operation of the Central Laboratories for monitoring water quality, operation of the Central Workshops for maintenance of movable assets such as vehicles and pumps, and the drilling of both observation and production wells as well as maintaining and rehabilitating operating wells. These functions should be evaluated and their viability assessed to determine if they should be retained by WAJ, or performed by the private sector.

It is proposed to unbundle the water value chain by separating bulk water production and treatment and wastewater treatment from water distribution. Thus, the third and fourth functions outlined above are proposed to remain within the new Bulk Water Supply Authority as a part of the reorganization.

Examples of National Bulk Suppliers

ONEP (Office National de l'Eau Potable) is a bulk water provider that produces 80 percent of Morocco's drinking water and sells much of it to the utilities and to private concessionaires. It also distributes water directly to customers in about 500 medium to small towns. ONEP has also taken over sanitation services in more than 65 of the towns where it distributes drinking water by 2009, and it is expected to take over sanitation services in a total of 191 towns by 2017. ONEP charges tariffs for the supply of bulk water to the private operators and the utilities. These tariffs are reviewed by the government together with those tariffs for the utilities and ONEP's retail water and sewer tariffs. Bulk water tariffs differ from one city to the other taking into account production costs. ONEP also has research capabilities, water monitoring laboratories, and has been awarded contracts outside Morocco.
http://en.wikipedia.org/wiki/Water_supply_and_sanitation_in_Morocco

Mekorot, the Israeli Water Company, is a bulk supplier for both urban needs and irrigation owned by the Government in full. It provides 70% of all water consumed. Water supply is through 10,500 km of lines some 750 pools and 91 reservoirs. In addition, it operates about 3000 facilities throughout the country as well as eight major control centers whereby the facilities are automatically and remotely commanded. Charges for Mekorot services are approved by Parliament. They operate sophisticated laboratories, conduct research and have been awarded contracts outside Israel.
http://www.mekorot.co.il/Eng/Mekorot/Pages/FactsFigures.aspx

FEATURES OF CHANGE

The main drivers and objectives of the proposed changes are:

- Elimination of conflicts of interest;

- Separation of regulatory and service delivery functions;
- Recognition and formalization of division of responsibilities; and
- Defining a single point of subsidy for urban water services.

PROPOSED REFORM

FUTURE ROLE OF WAJ (THE NEW BULK WATER SUPPLY AUTHORITY)

As guiding principles, the Bulk Water Supply Authority will (a) provide bulk water to utilities where supply is shared among more than one utility, (b) treat the wastewater produced jointly by more than one utility and sell the product, of specified quality, for irrigation and industrial purposes, (c) enter into contracts for development and/or conveyance of a water source, and (d) purchase raw water.

Possible examples of plants that the new Bulk Water Supply Authority would run are (a) the Zai Treatment Plant which currently produces water for Amman and the Balqa Governorate (If and when Balqa is consolidated into Miyahuna, the present retailer for Amman, the consolidated utility would then take over that component), (b) the As Samra wastewater treatment plant and (c) the Disi source of supply which currently serves only the Aqaba Water Company (AWC). The Disi source is currently within the jurisdiction of AWC and will revert to Bulk Water Supply Authority once the Disi project for supply to Amman is completed.

Fig 3.3.1 and 2 Work continues on the 300km Disi pipeline project

The Bulk Water Supply Authority will enter into contracts with the utilities for bulk supply. Terms and conditions of supply would address:

- definition of interface point(s) to which the bulk water is delivered;
- water quality standards with which the provided water should comply;
- the water supply regime, defined in terms of quantity and timing;

- costs that the receiving utility must pay for the supplied water (as defined by the regulator); and
- dispute resolution.

Regarding wastewater, the point where wastewater is delivered to the Bulk Water Supply Authority is to be defined. Transfer prices could include conveyance, pretreatment, treatment, and further conveyance or discharge, and would be determined by the regulator.

ROLE OF THE REGULATOR

Whereas the delivery of bulk water is regulated by contract, overall operational oversight and regulation of tariffs must be provided by the same independent public utility regulator that monitors the operations of the individual utilities. The regulator will calculate the target tariff needed for cost recovery for each of the utilities after giving due consideration to, among other things, the bulk water cost. After consultation and approval by the Cabinet of Ministers, the actual tariff will be set and an average unit rate of bulk supply established which would be the cost referred to in the bulk supply agreement. The difference between the Bulk Water Supply Authority's costs and the cost it charges to the utilities is then the amount of Government subsidy, which would be specified explicitly. There is therefore a single point of subsidy, wherein the amount of the subsidy might vary from one location to another, providing more equitable basis for calculating costs and adding transparency to the tariff setting process.

CHANGE PROCESS

It is recognized that some or parts of the steps shown below may already have been undertaken in light of the drive by WAJ to set the stage for private sector participation in utility operations under performance-based contracts. The implementation phase of the ISSP would include consideration of these pre-existing steps.

The first step in the change process is to investigate the legal implications of the proposed changes. These are expected to be minimal within the bulk supply context, as this function is already within the mandate of WAJ. The issues are in divesture of other WAJ functions to MWI and in the process of tariff setting, which are dealt with elsewhere in this report. Similarly the issue of ownership of the shares in the corporatized companies will need to be addressed, as currently WAJ is the shareholder on behalf of Government. As this recommendation makes clear, WAJ should no longer be both owner of and supplier of bulk water to the retail utilities, and ISSP will propose options to Government for future ownership and governance arrangements.

For setting prices of bulk delivery, the true costs at specific junctions of the value chain have to be determined. As in any utility, costs are divided into capital costs associated with expansion, rehabilitation and replacement of existing assets and operational costs primarily related to fuel, energy and manpower. Such costs can be assessed by the new Bulk Water Supply Authority, with the assistance of ISSP, according to standard procedures. Recommendations on tariff setting, will become the responsibility of the regulator which is to be established. It is proposed that initially the PMU in its present state, but reporting to the Minister, would undertake the regulatory role in the interim.

Review of the existing water supply and sanitation assets nationally is also an essential initial step. This review is an important component of the physical evaluation of the infrastructure to assess, among other things, the value of these assets (needed for cost determination), the availability of the system (inefficient pumps, corroded transmission lines, etc) and the optimal allocation of treatment plants to the Bulk Water Supply Authority and the utilities. The same applies to wastewater treatment plants.

A GIS-based geographic survey of existing networks, pump stations, and storage locations, will also be part of the assessment to better identify the proper interface location where the bulk becomes retail and to serve as a basis for an asset management system for utility infrastructure. Furthermore, the regulator will be setting performance standards which cannot be made with unclear and uncertain information on the status and condition of the infrastructure. Accompanying the assessment of assets will be an operational audit of the entire system, quantifying for example energy efficiency and water quality adherence. Reporting, however, should be done on the subsystems separately, as these subsystems will represent interface points between the Bulk Water Supply Authority and the individual utilities.

BENEFITS

Significant benefits accrue as WAJ focuses on bulk water supply and wastewater treatment, rather than on a variety of disparate issues Conflicts of interest are removed and MWI is able to focus specifically on water resource protection and management. Existing service units (laboratories, workshops, drilling unit) can be opened to competition for these services, further driving efficiency in the sector.

As a single entry point of subsidy, WAJ can be incentivized to reduce costs through incremental subsidy reduction.

The scheme is part of an overall plan that would make subsidies more transparent and encourage WAJ to concentrate on its core business of source development, supply of bulk water, and management of relatively large wastewater plants.

CONCLUSIONS

As part of the overall restructuring of the sector ISSP believes that focusing WAJ on bulk water supply and wastewater treatment will improve management of the sector. The particular separation of responsibilities in water resource management is a particularly important step, as is the separation of retail utilities and bulk water supplies.

STEPS TO IMPLEMENT

- Establish working group (2011).
- Define responsibilities and clarify definitions (2011/2012).
- Asset ownership structure and transfer plan (2012).
- Ongoing technical support and capacity building (2011-2013).

3.4 FULLY CORPORATIZE WATER UTILITIES

OVERVIEW

The currently corporatized water utilities, Miyahuna, the Aqaba Water Company (AWC) and Yarmouk, operate as only partially-corporatized government entities with limited decision-making autonomy. While there have been notable performance improvements at the two larger utilities, inadequate incentives for performance, outside interference in day-to-day operations, and incomplete regulation of service standards and tariffs have limited these gains. Reforms are recommended to fully corporatize these utilities, while strengthening board governance, creating strong internal performance incentives for both staff and company, and putting in place a strong and capable independent utility regulatory commission. The overall aim is to emulate a private sector performance ethic to achieve more efficient operation including reducing water losses, better services to customers and sustainable maintenance of the utility asset base.

RATIONALE

In the mid-2000's, first the Aqaba Water Company and then Miyahuna, came into existence. The two large government-owned utilities were established with the intent of having financial and administrative independence, to operate as viable, self-sustaining entities and to employ modern commercial principles and private sector practices in their management. Recently the utilities supplying the northern Governorates were also consolidated and corporatized (Yarmouk).

In practice these utilities have not operated as well as envisioned because WAJ has retained some degree of control over utility operations (at this stage Yarmouk has not been operating long enough to have been evaluated). This control has been exercised through appointments to the utility boards and, in the case of Miyahuna, the Secretary General of WAJ served as acting CEO for an extended period of time. The Performance Management Unit (PMU), a Ministry unit has been monitoring and regulating utility performance against standards set out in their assignment agreements[6].

While the Aqaba Water Company owns all applicable assets, WAJ handed over rights to use applicable assets to Miyahuna without transferring actual ownership. Miyahuna is responsible for normal

[6] The PMU currently monitors the performance or the corporatized utilities, but does not set tariffs or service standards, nor does it issue utility licenses, all of which are key functions or the proposed regulator. The proposed Water Utility Regulator Commission would replace the PMU as the "regulator" and would perform this full range of regulatory functions.

investments in the assets up to a fixed aggregate annual amount set in its annual budget, while investments above the budgeted annual limit are to be made by WAJ. This division of responsibility blurs the lines of accountability for maintaining the condition of the assets, undermines the development of an optimal rehabilitation, replacement and expansion program and has led to ongoing deterioration of the asset base.

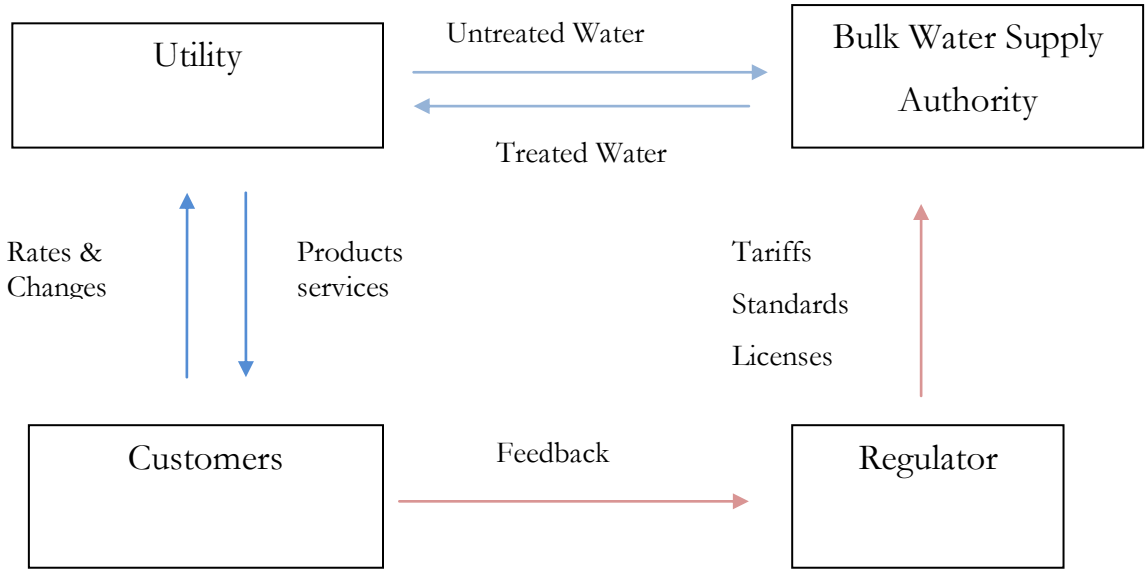
Also, procurement and auditing practices tend to follow civil service-like rules and operate with a civil-service ethic. Tariffs are set by the government, typically at rates well below those needed for full cost recovery. At the same time, the utilities are subject to sales tax on inputs, and income tax, just like private companies, giving the utilities, in some ways, the worst of both public and private sector worlds.

PROPOSED REFORM

The keys to effective utilization of corporatization to improve utility performance are:

- devolve sufficient authority to utility management to develop and implement an operational strategy;
- create appropriate processes and incentives for effective corporate governance and operational management; and provide for rigorous financial and technical oversight without interfering with day-to-day management decision-making.

Relationship between Parties



Three interlinked changes are proposed to accomplish more complete corporatization of Jordan's water utilities: (1) separate bulk water supply from utility ownership and oversight; (2) revise governance and

management arrangements to increase operational autonomy and accountability; and, (3) create an independent utility regulatory commission to oversee utility financial and service delivery performance. Conceptually, this model is shown in the diagram above.

SEPARATION OF BULK WATER SUPPLY FROM UTILITY OWNERSHIP AND OVERSIGHT

As noted in the previous section current ownership and governance means conflicting interests for WAJ. It is proposed to revise its mandate to refocus it as a bulk water supply and water source development authority which provides treated bulk water supplies, as well as wastewater treatment services, to the country's retail utilities. This structure would provide clearer and more manageable objectives for each operating entity and mitigate conflicts of interest.

The current arrangement is one of conflicting interests because WAJ is effectively on both sides of many issues. Unbundling the current cross-holdings is important to create the arms-length relationship between the utilities and their bulk supplier that is needed to drive down costs and improve service in all parts of the water sector via progressively tighter service agreements/contracts.

In principle the bulk supplier should generally perform water and wastewater treatment throughout the country, but there will be some exceptions based on local circumstances, and these will be discussed in detail during the implementation phase. In general the utilities will specialize in retail functions, being either divested of their current bulk treatment facilities or retaining only such facilities as are dedicated to an individual utility. The latter option may be more convenient operationally, but it cuts across the concept of having a single subsidy point for the municipal water sector, since some of the utility-specific plants are expensive to run[7], and so needs more detailed investigation focused on the individual circumstances of each utility. There is a need to clearly define the extent of bulk water supplies and this will be undertaken in 2011/early 2012.

Agreements for bulk water supply and wastewater treatment will need to be made between the bulk water supplier and the utilities specifying the terms and conditions for delivering bulk water to each utility and treating each utility's wastewater. This is a highly sensitive area because of the scarcity and variability of available water resources, so the Water Utility Regulatory Commission (WURC) needs to approve these transfer agreements and set the price for bulk water supply.. This is to ensure that all

[7] Zara Ma'in and Zai treatment plants, which are overwhelmingly dedicated to Amman, cost about 25 million JD to run including the cost of pumping the treated water, even at an electricity price of half the usual rate for large industrial users

technical, economic and social equity issues are fully considered, and that the public is confident in the fairness of water allocation. On a day-to-day basis, the utilities and bulk supplier will manage water transfers on an arms-length basis, per their agreements.

The Water Authority currently provides water and wastewater services directly to a number of communities outside the boundaries of the established utilities. As a part of this realignment of functions, it will be necessary to attach each of these directly served communities to a regulated corporatized utility, since WAJ will no longer be in a position to provide such services.

The Northern Governorates Water Authority has recently become the third regionalized/corporatized water utility in the country, to be called the Yarmouk Water Company., headquartered in Irbid The areas where the corporatization model may be problematic are the sparsely populated governorates in the south of Jordan, and in some parts of the Jordan Valley. There are, however, options to cover these areas by expanding the territory of existing utilities or by establishing separate regional utilities.

In general, Jordan's retail water sector should be consolidated into between three and six regional retail utilities, focused on local product delivery and customer service. A key goal should be to move these utilities towards financial self-sufficiency over time, a goal that requires independent economic and service regulation.

GOVERNANCE AND MANAGEMENT CHANGES

To create the autonomy, incentives, and accountability needed to raise utility performance and increase efficiency, a number of steps are recommended.

OWNERSHIP OF CORPORATIZED UTILITIES

Currently WAJ has the responsibility for ownership of the shares in the retail utilities, on behalf of the Government. As supplier of bulk water to the utilities this leads to conflicts of interest over levels of supply and pricing of bulk water. However there would also be conflict of interest if MWI were owner of the shares, due to their particular role as guardian of water resources which could lead to compromises over long term source protection compared to short term delivery of water. Other alternatives are for Government to directly own the shares or for a separate holding company or agency to be established to hold the shares on behalf of Government. These options need to be investigated further so that Government can make an effective choice based on clear analysis. ISSP will undertake this analysis in conjunction with the relevant working group.

NEW BOARDS

Utility boards are the critical link between regulatory oversight and corporate performance. The utility board has the primary responsibility of ensuring that the company effectively implements its approved business plan and budget and meets the annual and multi-year performance targets set by the utility regulator.

Future utility boards should be composed of individuals with a combination of skills that include civic leadership, water and wastewater utility management, public health, compliance with environmental regulations, financial and risk management, and legal skills[8]. Whatever the composition, it is important that board selection rules be established in the utility's corporate instruments so that absolute discretion in the appointment process is limited. Once selected, there should be limits on the removal of individual board members before the ends of their terms, though a dissolution of the Board by the owner should remain a possibility, but only under pre-defined circumstances.

Board activities should include:

- Selection of the CEO, CFO and Company Secretary;
- Developing internal policies and approving the business plan and budgets for submission to the utility regulator;
- Providing checks on staff recommendations, such as insisting on the development and analysis of alternatives to high cost capital projects;
- Using the business plan and budget as the key points of reference for performance measurement and employee incentive measures;
- Financial and performance audits; and;
- Ensuring that the objectives of the shareholder are met.

The boards should not be involved in the execution of operations, employee selection, other than of the CEO, and should be strategic in their outlook and actions as opposed to event-driven.

ASSET OWNERSHIP AND TRANSFER

Ownership of assets is a difficult issue that needs to be addressed with due consideration of the various options. Historically a number of organizations across the water sector have invested in assets which

[8] In the case of Miyahuna, it is suggested that the board could be composed of, at a minimum, a representative from the Greater Amman Municipality, a representative from the MWI, an expert in water/water waste utility management, a representative from the Ministry of Health, a representative from the Ministry of Environment, a chartered accountant/public sector auditor and a partner in a major law firm that deals with public agencies.

have led to an overlap within the system and a lack of clarity over maintenance and extension of those assets. There is a reasonable view that these are essential public assets and should remain under public control. Within the corporatization process there are two existing models – in Aqaba the water company owns all of the assets, whereas in Miyahuna the assets are owned by WAJ and leased to Miyahuna. As WAJ divests itself of ownership of the companies it also needs to divest applicable assets, which should be transferred to a new owner. There are a number of options for this, including the utilities themselves, the holding company could be the asset owner, or Government could hold the assets directly.

In each case the license (or assignment agreement) would need to clearly define the rights and obligations of the utilities in respect of use, maintenance and extension of assets. It should be noted that in the particular case of Miyahuna, the transfer of all assets to them would result in a high burden in terms of their balance sheet and hence profits/loss, which under the relevant laws would quickly make them insolvent. It is therefore proposed that the options are reviewed in detail so that an informed decision can be taken.

Clarification of asset ownership coupled with regulation of asset condition by the WURC, will create an incentive structure that encourages adequate investment in system upkeep and renewal. It also clarifies lines of accountability for asset condition and performance and will improve utility financial positions. For these incentives to be effective, however, the utilities will need to be able to retain earnings for reinvestment.

Fig 3.4.1 Planned maintenance programs are essential for ensuring assets function properly

FINANCIAL MANAGEMENT

As noted above, the utilities should have the ability to retain earnings and reinvest them in system improvement (i.e. "ring-fencing"), not have their revenues treated as pooled revenues for the sector.

Otherwise it will be difficult to hold the utilities accountable for their performance, and investment in the utilities' infrastructure will always be sub-optimal. Financial ring-fencing will also facilitate the model ideal whereby there is only one point of subsidy for the water sector, (i.e. through the bulk supplier, by not passing on the costs of treated water and wastewater treatment (in full or in part) to the utilities9.)

The utilities should aim to move towards full cost recovery over time, encouraged and supported by the regulator, with subsidies ideally embedded only in bulk water prices and wastewater treatment fees charged by the bulk supplier. Management should be driven by the approved business-plan and budget, which should incorporate progressively tighter efficiency and performance goals linked to incentives and tariffs. Periodic asset condition audits10 should ensure proper levels of maintenance and investment.

Another needed change is to remove restrictions imposed on the companies by rigid government purchasing and tendering rules. Purchasing procedures in accordance with the relevant law should be implemented to achieve sustainable operations and minimized total costs, via a "whole-life cost" focus, not "lowest initial price".

EMPLOYEE INCENTIVES

It is proposed that an incentive component be included in utility employee compensation to move the mindset of utilities away from the current civil service ethic and to introduce a more commercial and customer-focused orientation. In Miyahuna's case, most employees qualify for an automatic "13th month" salary in June, with the potential to earn a "14th month" salary in December, depending on individual evaluations. Previously, the 13th month was also subject to performance review but this was recently changed to make it automatic. This change is in exactly the opposite direction of the one needed.

Employee incentive payments should be a combination of individual and team or utility results. The box below gives some examples of employee incentive programs used by water utilities worldwide. Incentives in Jordan, though, obviously need to be developed with local circumstances in view.

---

[9] Subsidizing water and wastewater treatment is also effectively subsidizing electricity, since most of the sector's electricity is not used in local water distribution and wastewater collection. But even if bulk water and wastewater treatment (and the embedded electricity cost) was provided to a utility for free, it may be that there is still some subsidy needed for that utility if it supplies a lot of dispersed small communities. Consolidation of utilities into the smallest practical number will help to minimize the need for such direct utility subsidies.

[10] Both plants and network assets should be periodically assessed regarding asset condition to provide feedback to the utilities, MWI, and the WURC on the adequacy of maintenance and investment budgets and to achievement of asset management plans.

Examples of Utility Incentives Schemes Worldwide

1. Yarra Valley Water (Australia, corporatized public agency). Executives receive up to a 20% bonus based on a combination of utility achievement (profit, KPIs) and individual achievement.
2. Northeast Water (UK, private sector). Workers can receive up to 17% of base wages based on productivity. There is individual personnel appraisal for every employee from the lowest to highest levels.
3. Lyonnaise des Eaux West Paris Region (France, private sector). Workers receive a share of profits, negotiated between the company and each individual.
4. Northwest Water (UK, private sector). Workers receive up to 10% of salary as a bonus depending on productivity and customer service measures.
5. Los Angeles Department of Water and Power (USA, government-owned utility) has a "Productivity Improvement Program". Workers receive points for exceeding productivity standards based on the number of jobs completed per day/week for different jobs. This is a team-based program. The best team each month receives a half day off, a barbeque, and a half day to do whatever they like at the depot.

It is important that the bonus amounts are meaningful, but not so large that it becomes a primary focus. Performance bonuses should only be paid out of profits; that is, achievement of certain indicators should not trigger a bonus unless the utility has the capacity to pay, while meeting all financial targets. Total employee compensation levels would be approved by the regulator through the business plan.

ISSP will work with the utilities to develop effective incentive schemes based on best practice.

REGULATION

The main aspects of the relationship between the regulator and the utilities (and perhaps between the regulator and the bulk supplier[11]) are in tariff and service standard setting, approval of business plans and budgets, monitoring of employee compensation, licensing, reporting, dispute resolution and funding the regulator's activities[12].

A more detailed description of the role of the WURC and its relationship with the utilities it regulates is found in Section 3.5 below on the Water Utility Regulatory Commission.

[11] The bulk supplier should be regulated with respect to costs and service, because it will be a monopoly supplier.

[12] The draft Water Regulatory Commission law prepared by the WSAU in 2009/10 contained a wide range of other aspects such as water quality standards and policy advice, which are not typically the role of an economic/service regulator, and are not part of the concept being presented here.

BENEFITS

The following are considered the main benefits of the proposed restructuring:

- Companies have greater incentive to improve operational efficiency than is the case in public sector utilities, and are able to reinvest profit to improve infrastructure and therefore levels of service to customers. Companies are able to work flexibly to address current needs.

- It is noted that operational efficiency has improved in Aqaba Water Company with a significant reduction in Non-Revenue Water being achieved since incorporation of the company.

- Compensation for employees can be directly related to both personal and company performance.

- Benefits accrue to the shareholder through payment of an annual dividend based on profit.

- Benefits accrue to the asset owner (currently WAJ on behalf of the Government) through leasing charges to the utilities for the use of Government infrastructure, which in 2009 amounted to 9,269,000JOD for Miyahuna alone. Despite these high leasing charges (12% of total expenses) Miyahuna made a small net profit of 19,637 JOD in 2009. It is reported that 2010 results showed a break-even position.

- Forecasts indicate that all three corporatized companies expect revenues to increase over the next few years.

- An independent regulator would be a necessary and valuable requirement to ensure that the monopoly position of the water utility company was not abused. This would provide the benefit of a dedicated organization defining customer service levels, key performance indicators and approving a tariff level based on realistic improvements in service levels.

- The regulator also provides a source of independent information to Government based on proper analysis, particularly related to tariff adjustments.

CONCLUSIONS

ISSP has concluded that the significant benefits of complete corporatization will enable the water sector to improve efficiency and reduce costs over time. It is essential that the process of corporatization is completed together with resolution of issues including ownership of shares and ownership of assets.

Clarity of responsibilities over these issues will enable companies to develop real cost information for supply of water and therefore improve business plans based on analysis of hard information.

STEPS TO IMPLEMENTATION

The steps below outline the needs to complete the establishment of the corporatized water utilities. These steps assume that the new regulator and bulk supplier come into being as recommended in this assessment.

PHASE 1

- agree on future utility territories, HQ location, assets/systems under management, and decide any bulk operations that will remain their responsibility (2011/early 2012)
- decide on the organizational structure of each utility, the mix of functional and geographic roles that each one will have, and any new departments needed to execute their roles (2011/early 2012)
- design transitional arrangements such as staff transfers, key personnel choices, and harmonization of salaries where employee transfers are to occur (2012)

PHASE 2

- establish the utilities that do not already exist as legal entities with exclusive rights to provide service, collect revenue, and so on within their territories (2012)
- modify articles of incorporation including specifying board composition (2012)
- establish the new utility boards (2012/2013)
- set up bulk supplier agreements with the bulk supplier (or with WAJ in the interim) (2012)
- transfer legal ownership of each utility from WAJ to a new shareholding agency (2012)
- transfer employees between WAJ and the utilities to fit the new industry structure (2012/2013)
- utilities prepare a business plan for the first 5 years of operation, and a budget for first year of operation, and submit to the WURC for approval (2012/2013)
- negotiate transfer prices for bulk water and wastewater treatment with the bulk supplier and regulator (2012/2013)

PHASE 3

- Commence operations of the new utilities (possibly with a staggered start) (2012/2013).
- Strengthen departments as required at each utility to execute new business plans (2011/2013).

- Begin providing data to the WURC (or the PMU in the interim) (2011/2013).
- Refine business plans based on early experience (2012/2013).
- Refine monitoring procedures in conjunction with regulator (2012/2013).

3.5 ESTABLISH THE WATER UTILITY REGULATORY COMMISSION

OVERVIEW

The restructuring and unbundling of the sector, recommended in previous sections of this report, will not be successful unless it is supported by an appropriate enabling regulatory environment for monitoring and compliance, supporting transparent and clearly defined subsidy levels, and providing system incentives. The establishment of the "Water Utility Regulatory Commission" (WURC) is an integral and essential part of restructuring the sector. It will improve the operating and financial efficiency of the utilities, protect customers through efficient pricing and compliance with performance standards, ensure economic efficiency in the sector through financial viability of the operators and the efficient use of water resources, and create an environment conducive for private sector investment in the sector.

Because it will take time to establish the WURC we recommend that the Ministry of Water and Irrigation establish an interim Utility Regulatory Department for regulating bulk and retail water utilities. The Regulatory Department could be established by a cabinet decree or amendment of the Ministry By-law. This Department will report to the Minister of Water and Irrigation, and will be the nucleus for the Regulatory Commission in the future when a new water law is passed to organize the sector functions.

The interim arrangement may require changes in the Water Authority of Jordan Law, particularly article 6h which requires WAJ to regulate water uses and reduce waste, and article 10f requiring WAJ to support tariff analysis and make recommendations. It is anticipated that a new Water Law will need to be prepared to consolidate all of the reforms recommended to improve the sector, and especially to establish the regulator.

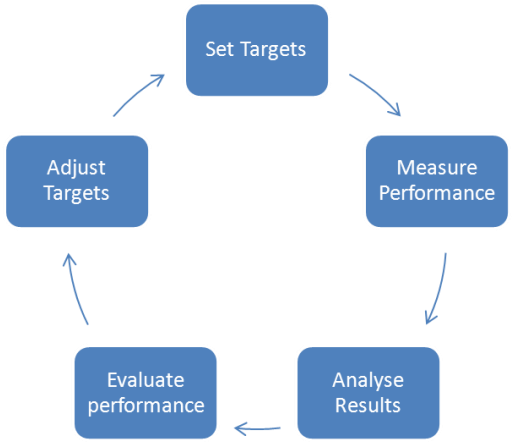
RATIONALE

Jordan has recognized the need to advance reform and efficiency improvement for water utilities and has implemented structural changes including corporatization. The management and commercialization models with the public corporatized water utilities and with private management contract have included obligations, under the assignment agreements and the contracts, to meet certain requirements and indicators. By the nature of these arrangements, the auditing statutory approach is being applied to these utilities. For the rest of WAJ operations, monitoring through KPI's monitoring and reporting has been

applied. The EU "Al-Meyyah Program" has been supporting the sector in developing the regulatory functions and building the capacity to implement these functions. In 2007, the EU team prepared the roadmap for the Water Sector Audit Unit (WSAU) to improve operating and financial efficiency and protect the interest of the customers of the utilities.

As the sector is restructured to more fully corporatized utilities and separate bulk water from retail services, an independent, strong, capable and impartial utility regulator is required. However, the existing organizational setup and capacity are inadequate to perform the regulatory functions, advance sector efficiencies, and build the core needed to transform into the water utility regulatory commission.

Fig3.5.1 Performance monitoring through KPIs



PROPOSED REFORM

OBJECTIVES OF WATER UTILITY REGULATORY COMMISSION

The main objectives of the Water Utility Regulatory Commission and Interim Regulatory Department are:

- Providing advice on tariff adjustment applications and capital investment plans
- Providing advice and recommendations to Government on tariff and subsidy levels
- Setting performance standards
- Monitoring and auditing of performance against statutory and contracted obligations and benchmarks
- Issuing and enforcing licenses
- Monitoring of performance using established performance indicators

- Publication of the results of the performance monitoring and audit activities

RESPONSIBILITIES AND SCOPE

The main aspects of the relationship between the regulator and the utilities are in tariff- and level of service-setting, incentives, licensing, reporting, dispute resolution and funding the regulator's activities. The subsections below discuss the responsibilities and scope under each sub heading:

BUSINESS

- Review and approve business and investment plans
- Analyze governance structures and performance and provide recommendations for adjustments
- Advise the government on bulk supply development and its implications on cost of services and bulk sale agreements between the Bulk Supplier and the utilities

TECHNICAL

- Monitor and audit compliance with statutory and contract obligations
- Analyze data and performance indicators
- Review and amend technical reporting requirements
- Analyze assets management as well as operational, , and efficiency improvement plans
- Set performance targets for services

FINANCIAL/ECONOMIC

- Establish specific financial audit requirements
- Analyze audited financial data and compliance against targets
- Examine utility financial projections and models
- Develop tariff policies and review tariff structures with the utilities
- Manage the tariff recommendation process, e.g. data collection, analysis, draft recommendations, final recommendations and preparation of reports to Minister
- Analyze data and utility performance indicators, in terms of financial performance
- Set business performance targets

LEGAL

- Issue licenses to all the regulated entities (not in the interim period)
- Apply enforcement measures
- Consult with other enforcement agencies as needed

- Protect consumer interests

COMMUNICATIONS/ MARKET RESEARCH

- Develop public awareness on water tariffs, government subsidies, demand management of consumer, etc. (maybe combined within MWI awareness programs)
- Conduct market research and report the findings
- Survey customer expectations
- Analyze willingness and ability of customers to pay
- Conduct affordability surveys

BENEFITS

Establishing a regulator brings considerable benefit to the sector and to customers through establishing clear operating objectives through key performance indicators especially in regard to service levels. The regulator also establishes analytical processes for developing tariff (and hence subsidy) levels for recommendation to Government.

In the process of reporting to the regulator on key performance indicators utilities will develop improved management processes thus enhancing efficiencies, and will encourage the companies to focus on strategic issues including non-revenue water reduction.

The business planning process is enhanced as water companies will need to produce, in detail, their plans and costings for the coming period in order to establish correct tariff rates.

By implementing a regulatory regime Government is able to rely on proper analysis in responding to public comment on water charges, service levels etc.

CONCLUSIONS

ISSP has concluded that the overall package of reforms including refocusing WAJ on bulk water supply, fully corporatizing the utilities and regulating the operations of those utilities is essential to enable needed service improvements to be made. Without the total reform package then the full benefits of the reforms will not be achieved. Regulation is therefore a critical aspect of the reforms bringing significant improvements to operations.

STEPS FOR IMPLEMENTATION

It is important to develop an actionable plan to establish the Regulatory Department within the Ministry for transforming it in the medium/long term to the Water Regulatory Commission. The plan will provide detailed steps with associated resources, but the basic steps are outlined below.

- Assign regulatory functions from WAJ to MWI (2011)
- Amend MWI By-law or issue a cabinet decree to add the regulatory functions to MWI (2011/early 2012)
- Develop the organization structure of the Regulatory Department including institutional functions, job specifications, and organization structure (2011/early 2012)
- Recruit the technical, financial, legal and communication expertise from within the sector or from the market (2012)
- Design training and capacity building for the staff (2012)
- Provide technical assistance through donor agencies to build capacity, build the tools and develop the operational procedures (2012/2013)

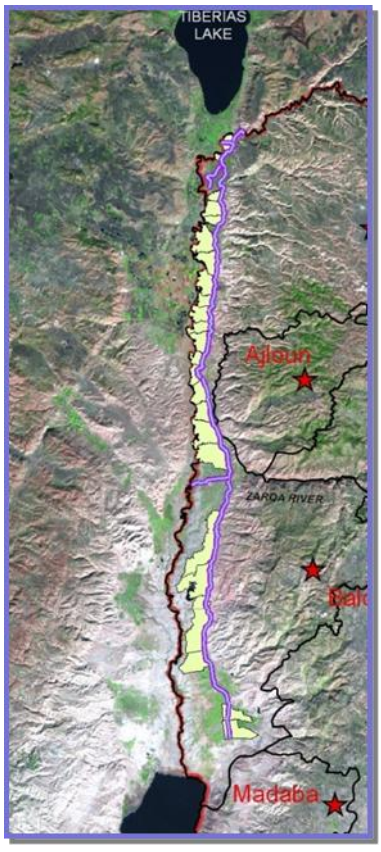
3.6 BUILD AND EMPOWER JORDAN VALLEY WATER USERS ASSOCIATIONS

OVERVIEW

This recommendation is to more fully empower Jordan Valley Water User Associations (WUAs) through revised legislation and building capacity in their operations in order to continue the process of transferring tertiary-level operational responsibility to the WUAs from JVA. The Jordan Valley Authority has a number of areas of responsibility including land management and development, which need to be reviewed as part of the transition from being a multi-sector regional development organization to a regional water supplier and manager. As a part of this process, it is working to devolve responsibility for distributing water among farmers to a set of farmer-based organizations—WUAs—covering the entire irrigated area of the Valley. This process has enjoyed a strong beginning but is incomplete, and must be finished before additional steps can be taken to rationalize the structure of water resource management in the Valley. It is also recognized that the capacity of potential WUAs may be quite weak. ISSP will therefore carry out a detailed study of the current role and responsibilities of JVA and review the capacity of the WUAs in order to fully develop this recommendation.

RATIONALE

The Jordan Valley Authority (JVA) was a pioneering regional development authority established in 1977 to develop the Jordan Valley (JV). To this end, it was given a broad range of functions related to land and water development as well as planning and development of social infrastructure such as roads; domestic water supply, electricity, and telecommunications systems; and planning and laying out towns and villages.



By the end of the century, JVA had completed many of these tasks, and its legislation was amended in 2001 to remove functions related to the development of social infrastructure such as roads, electricity, domestic water supply and telecommunications, as well as responsibilities related to town planning and development. Important tasks which remain with the Authority include operation and maintenance of irrigation systems,

and land allocation and administration.

Also in 2001, the JVA began a cooperative program with the German development cooperation agency (GIZ) to introduce participatory irrigation management in the JV. It also embarked on a program of establishing Water Users' Associations (WUAs) across the 32 thousand hectares of irrigated land in the Valley. This effort followed the gradual decrease in tertiary level distribution efficiency[13] as a result of deferred maintenance and network deterioration, growing farmer dependence on the JVA to solve problems, and a lack of cohesion and cooperation among farmers at the tertiary level.

Fig 3.6.1 Distribution of irrigation water will become the responsibility of WUAs

Recognizing the difficulty of the task, the partners designed a nine-year process to build confidence among farmers, establish WUAs, and transfer management tasks to thee WUAs. By 2010 about 80% of this area was served by 22 WUAs, each covering an irrigated area of, on average, 700 to 1,000 hectares. However these existing WUAs function at differing levels of effectiveness, and they are handicapped in taking on new responsibilities by the absence of legislation allowing then to be established as legal personalities. Moreover GiZ is in the process of phasing out its assistance to the WUA program.

PROPOSED REFORM

The vision of a future management regime for irrigation water in the JV involves a government bulk water supplier delivering water to primary distribution points, where WUAs, functioning as independent self-financing irrigation utilities, assume responsibility for its distribution among farmers. The

[13] The system level between the large pressurized pipe distribution systems operated by JVA and individual farms and distributes water to the farms.

relationship between the utilities and the bulk water supplier would be governed by contracts and would entail payment by WUAs for a specified level of bulk water service. Each WUA would, in turn, use and maintain the tertiary facilities constructed by JVA to provide irrigation service to all farmers operating within its boundaries according to rules it devises, and would levy and collect water charges from them for this service. Once this capacity is in place, and once JVA's land administration duties are completed, the role and functions of the Authority could be re-assessed with a view toward a further step in rationalizing and streamlining the architecture of the Valley's water sector.

The immediate challenge is now to develop amendments to the existing JVA law which would authorize, define, and empower WUAs to be irrigation utilities, and to then further strengthen the capacity of existing WUAs to do so. Training is needed in tertiary system operations and maintenance, planning and financial management and organizational governance. Additional measures to build trust between WUAs and JVA personnel are also required, along with expansion of WUA coverage to include the remaining 20% of the JVA service area.

The legal powers required by the WUAs include the ability to be established and function as legal entities, to levy and collect fees and manage funds, to enter into contracts, and, importantly, to act as a service provider to, and collect fees from, all surface irrigation water users within its boundaries. Moreover, the law also needs to describe the process by which a WUA acquires this "irrigation district" status.

Established WUAs also need to be aided in creating a federation of WUA officers to serve as a single contact point for discussions with the JVA.

BENEFITS

Reallocation of the local irrigation water supply to water users associations will enable these local units to provide services that better reflect the needs of farmers in the area. In addition negotiation and agreement over water use is likely to be more constructive and immediate compared to current systems.

Maintenance of the irrigation systems is expected to improve as those in most need of the water will be responsible for ensuring that the service is provided.

CONCLUSIONS

ISSP believes that the development of WUAs is a critical step in the improved development of the Jordan Valley, together with refocusing JVA on its core activity of providing the bulk water for irrigation. ISSP also recognizes that there are a number of steps that need to be taken including a review of the

legal status of the WUAs, improving capacity of WUAs and recognizing the broader role of JVA in development in the Jordan Valley.

STEPS TO IMPLEMENT

The following steps are suggested to further the WUA development and strengthening process.

- Establish JVA working group (Immediate).
- Develop terms of reference for JVA study, focused on land management and development responsibilities (2011).
- Comprehensive capacity assessment of WUA(2011).
- Develop action plan following completion of additional JVA study (early 2012) including shared long-term vision of water delivery in the JV.
- Prepare revised amendment to JVA law authorizing and defining powers of WUAs (2012).
- Develop comprehensive plan for achieving autonomous WUA operation, including need for selective rehabilitation of pipe networks.
- Assess training needs for both WUAs and JVA personnel supporting WUAs.
- Provide on-going capacity building support, in conjunction with GiZ (2011-2013).
- Transfer management authority to WUAs in stages.
- Establish JV-wide WUA federation.

4 IMPLEMENTATION PLAN STRUCTURE AND FUNCTIONS

4.1 IMPLEMENTATION PLAN

OVERVIEW

The detailed implementation plan for the restructuring process will be developed in conjunction with the Ministry of Water and Irrigation and other key stakeholders. ISSP has requested the ministry to design working groups for each recommendation to work side by side with ISSP to oversee and implement all aspects of the proposed reforms. This will include developing a detailed program for each recommendation which the working group would then monitor. Membership of the working groups would include key departments of the Ministry, key stakeholders and ISSP.

Throughout the process, outreach and awareness actions will be identified and built in to the program. O implemented to help both the general public and the staff of the Ministry (including WAJ and JVA) and utilities to fully understand the changes that are taking place.

ACTION PLAN PROCESS

- In order to develop the action plan and begin the implementation process the following activities need to be undertaken:
- Set up working groups for each recommendation (3-4 key decision makers each) to work with ISSP team on implementation
- Establish an ISSP office at the Ministry to enhance cooperation and collaboration
- Sign MoU between ISSP and the Minister
- Prepare a comprehensive implementation plan by October 2011
    - Activities, milestones, timing
    - Indicate any additional studies
    - Designate points for review and update as necessary

- Implementation of all activities started by November 2011

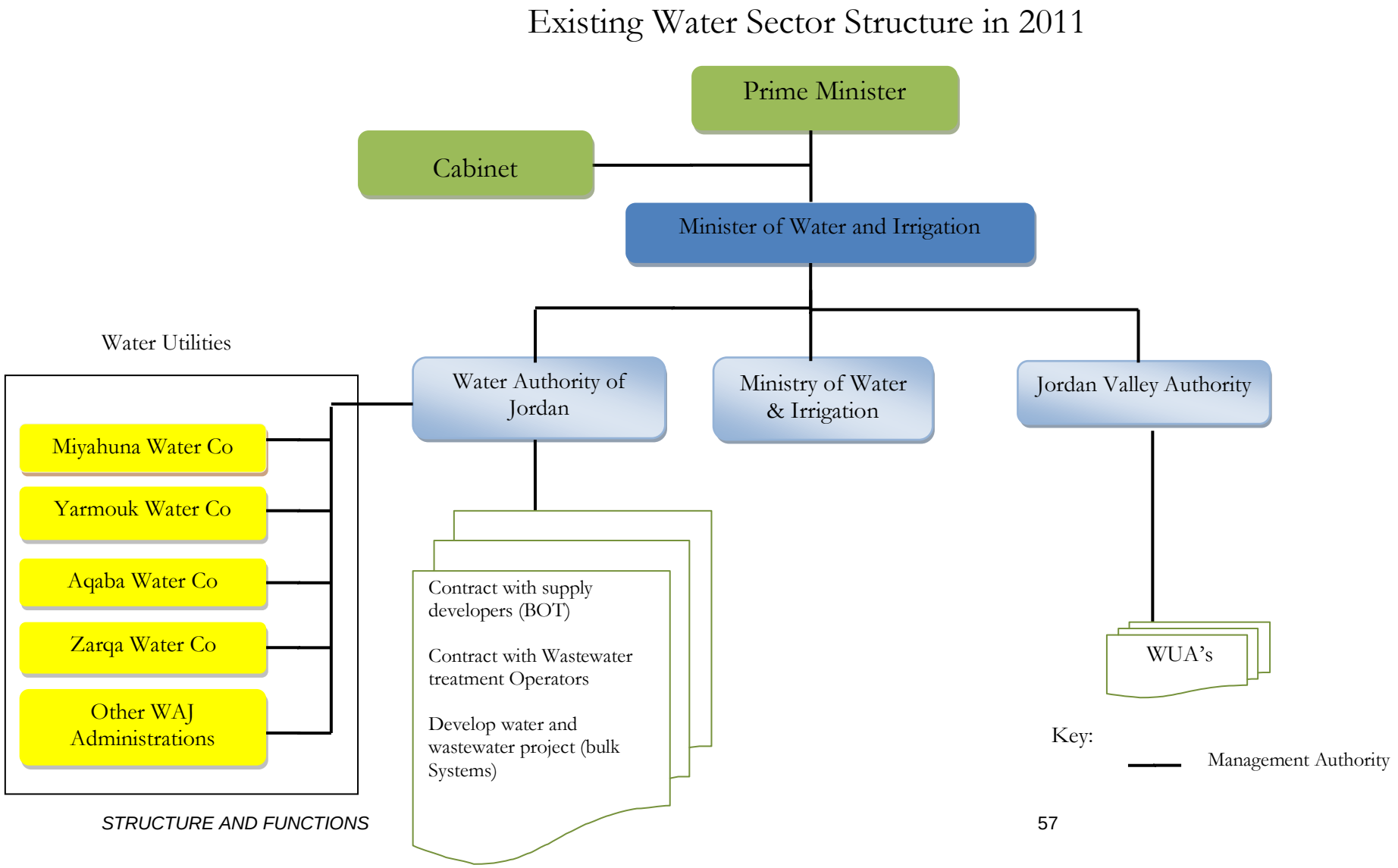
ISSP IMMEDIATE NEXT STEPS

ISSP has been preparing the ground work for immediate implementation following the agreement of the Ministry on the recommendations in the IA report. In the short term, therefore, ISSP will:

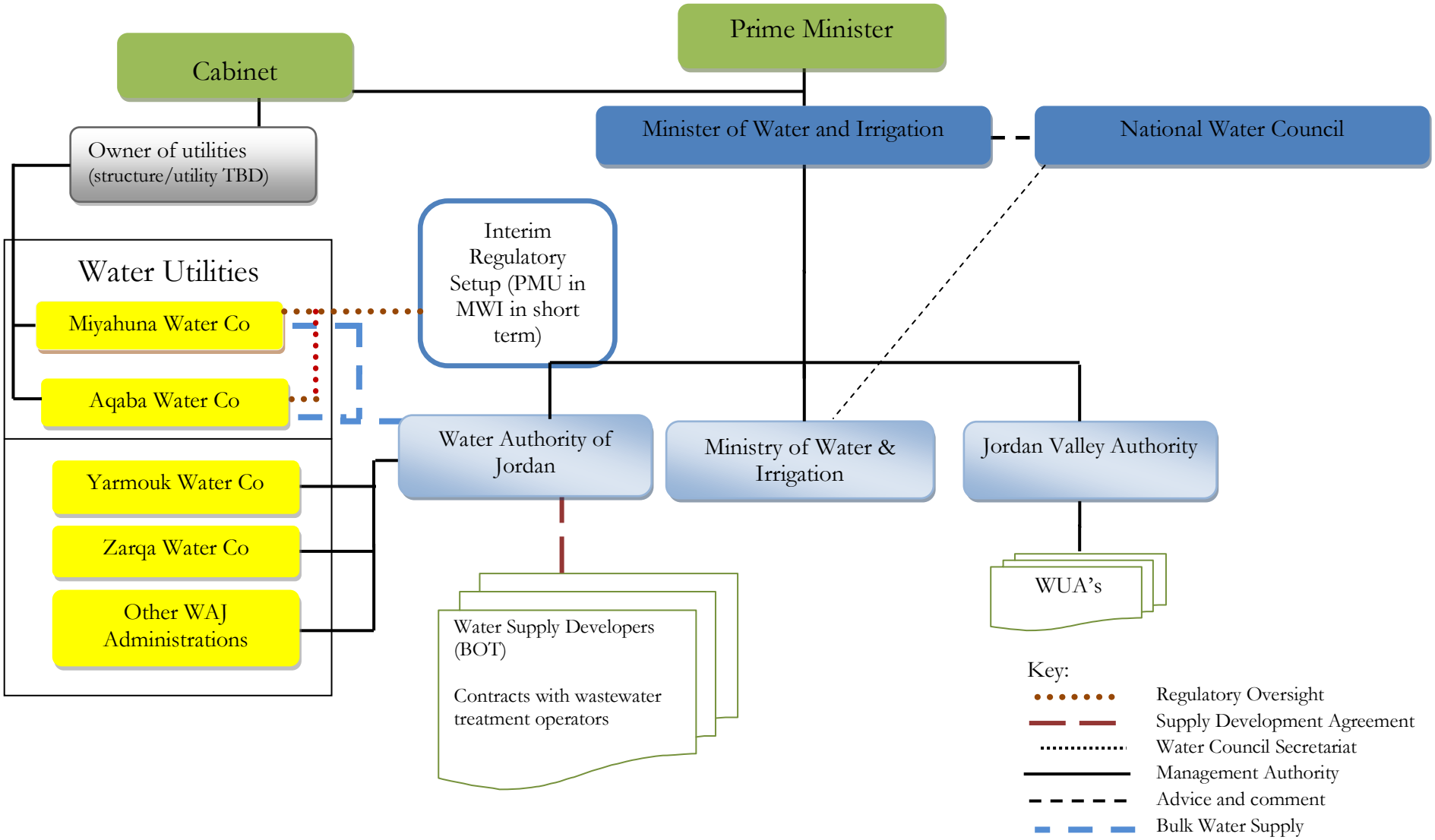
- Develop the detailed action plan with the working groups
- Prepare an MoU for signature by ISSP and the Minister
- Recruit and mobilize a Senior Utility Advisor to Miyahuna (expected October 2011)
- Recruit and mobilize a tariff expert to undertake a tariff study
- Recruit and mobilize a regulatory specialist to support the development of the independent regulator
- Prepare the Scope of Work for a review of land management issues in the Jordan Valley
- Commence work with MWI and WAJ on transfer of licensing/permitting
- Begin a comprehensive legal analysis
- Begin the utility assets and ownership assessment and develop scenarios and options, with a recommended timeline for transfer.

The following diagrams show overview of the existing management structure of the water sector in 2011 followed by a target structure, anticipated to be in place by 2013.

4.2 STRUCTURE AND FUNCTIONS



Target Water Sector Structure in 2013



MAJOR CHANGES IN THE SHORT-TERM 2011 -2013

- Transfer ownership of Miyahuna and AWC to MWI.
- Miyahuna Water Company - Evaluate the utility assets, prepare a business plan and financial model for autonomous operations, improve the operational systems to be able to receive and distribute the Disi Water, and reconstitute the board of directors.
- Aqaba Water Company – prepare investment and business plan, develop financial model for autonomous operations, and reconstitute the board of directors.
- Reach agreements on the plans for corporatization of the other Water utilities – Plan will assessment of bundling options, the corporatization and PPP models, and the required operation and management support for implementation.
- Support the PPP option and corporatization option for the Yarmouk Water Company.
- Establish the Interim Regulatory Setup within the Ministry to monitor and audit the bulk and retail utilities. This will build on the existing PMU setup and may require a cabinet decree to enact it. This will also require transfer of utility oversight and monitoring in addition to tariff studies and recommendations from WAJ.
- Establish the National Water Council – membership is government agencies, business associations, and community organizations.
- Separate WAJ water resources policy, management, and planning functions including groundwater permitting, monitoring, and management and transfer to MWI.
- Continue strengthening WUAs in the Jordan Valley, prepare business plans, progressively transfer operational functions to WUAs, and establish a federation of WUAs.
- Ring fence the bulk water supplies within WAJ.

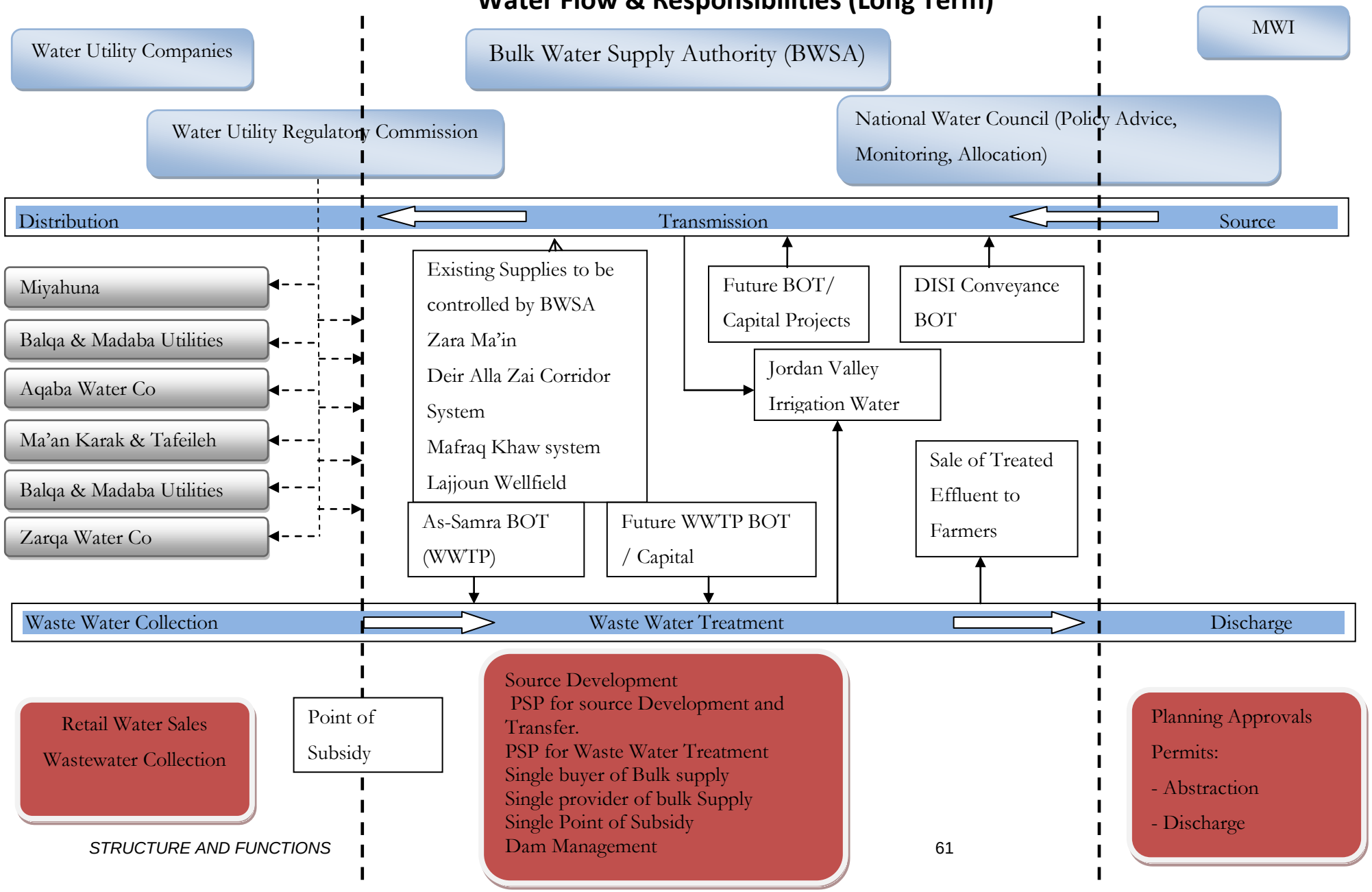
MAJOR CHANGES IN LONG-TERM TERM 2014 - 2016

- Corporatize the remaining water utilities
- Develop Bulk purchase agreements with the corporatized utilities
- Develop PPP Options (lease or concessions) for Water Utilities as appropriate
- Establish the Water Utility Regulatory Commission
- Provide transfer of responsibilities from JVA to WUA and the Federation of Associations
- Build the capacity of the Federation of the Water Users Associations to provide services to the Users Associations

- Possible merger of Water Authority of Jordan and Jordan Valley Authority as the National Water Bulk Company

The following diagram shows the anticipated water flow and associated management responsibilities that will be developed through implementation of the ISSP project, and the accompanying function matrix indicates the detailed responsibilities of the stakeholders.

Water Flow & Responsibilities (Long Term)



FUNCTION MATRIX

Water Sector Functions	Policy and Regulatory				Bulk Utility Managemen		Utilities in Partnership	
	National Water Council	Parliament	Ministry of Water & Irrigation	Water Utility Regulatory Commission	National Bulk Supplier	National Surface Irrigation	Utilities	Water Users Associations
Review and comment on national water policies	✓							
Review and comment on water allocations among various users	✓	✓						
Review and comment on MWI management strategies	✓							
Review and comment on sector financial performance and required government subsidies	✓							
Review sector progress in implementing policies and plans	✓							
Pass laws and determine annual budget for the water sector		✓						
Develop water sector policies and implementation plans			✓					
Manage and protect ground and surface water resources			✓					
Monitor water resources to achieve protection objectives			✓					
Issue licenses for groundwater and surface water development			✓					
Monitor compliance with abstraction and use limits			✓					
Develop implementation plans for water allocation			✓					
Implement sector policies and plans, coordinate, and monitor progress			✓					
Develop economic Incentives for water conservation			✓					
Promote demand management and conservation at the national level			✓					
Plan future supply and finance development			✓		✓	✓		
Conduct technical studies related to supply development			✓		✓	✓		
Draft legislation, regulations, and standards			✓					
Represent Jordan on Transboundary water issues			✓					
Plan and project future water supply and water neeeds			✓					
Collect, store, manage and use water data in program analyses			✓					
Set water tariffs for utilities and bulk water supplies				✓				
Define multi-year service levels and sector performance targets for utilities				✓				
Review utility performance				✓				
Review and approve utility business plans and annual budgets				✓				
Assess fees on utilities to support operation				✓				
Buy water from private suppliers (BOT contracts, private wells, desal operators, etc.)					✓	✓		
Maintain assets under jurisdiction					✓	✓		
Produce and sell water from own facilities					✓	✓		
Deliver water to utilities at transfer points					✓	✓		
Plan and develop new water supplies					✓	✓		
Transmit subsidies to utilities through bulk water pricing					✓	✓		
Manage shared water and wastewater treatment facilities					✓			
Own and manage water and wastewater facilities					✓			
Operate treatment facilities					✓			
Sell water to bulk water supplier						✓		
Empower and strengthen WUAs						✓		
Develop annual business plans and budgets for review by NWC							✓	
Develop PPP and outsourcing plans for selected utility functions							✓	
Contract with bulk water supplier for water and wastewater treatment							✓	
Sell water to retail customers							✓	
Collect wastewater							✓	
Retain capital reserves for systems improvement							✓	
Buy water from JVA								✓
Maintain facilities								✓
Distribute water to users								✓
Assess and collect fees (self-finance)								✓
Represent users to JVA								✓

5 LEGAL IMPLICATIONS

Successful restructuring and reform of the water sector will require a number of changes to the legal framework governing Jordan's water sector. As part of this larger assessment, an analysis of the policies, laws, by-laws, and regulations that constitute this framework was undertaken to identify where these changes will need to take place and the potential paths for making the necessary reforms. A general process for further defining and undertaking these reforms are addressed below.

In addition, the legal analysis provided an opportunity to critically assess the broader gaps, overlaps, and conflicts that exist within the current legal framework. The results of this preliminary study are provided in (Annex 7: ISSP Legal Analysis: An Overview of Gaps and Needs). While a more comprehensive study is necessary to identify the full range of issues with the existing framework, it is clear that the current laws do not sufficiently support and facilitate the implementation of the Government of Jordan's water policies. There is a need for a new, comprehensive water law to address these critical gaps and ensure that the various policies and strategies for the sector are implemented and enforced in an effective and accountable manner.

CURRENT STATUS OF JORDAN'S WATER LAW FRAMEWORK

The legal framework governing water resources in Jordan has evolved incrementally. As sectoral priorities changed, laws were passed to create institutions that could address specific management needs while allowing existing institutions to continue to function. This has resulted in a patchwork of laws, by-laws and regulations that create overlaps in authority among the Ministry of Water and Irrigation, the Water Authority of Jordan and the Jordan Valley Authority. A further layer of complexity has been added to this picture as other sectors, namely agriculture and environment, have addressed various aspects of water management within their own sectoral legislation and created more areas of potential overlap in authority. Without clarification of institutional mandates and effective coordination measures, the current framework leaves open the potential for conflicting claims to authority among agencies, confuses lines of accountability, enables duplication of efforts and inefficient use of resources, and ultimately undermines effective implementation and enforcement. The institutional reforms being proposed in this Assessment are meant to address many of these issues, but they will need to be implemented and codified by the necessary supporting legal reforms.

The conflicts of interest discussed throughout this Assessment have also been entrenched in the laws allocation authority among sectoral agencies. Where recommendations have been made, for example, to streamline the authority of WAJ and consolidate water resource management and planning authority in the Ministry, the law must be amended to re-allocate authority and oversight in a manner that ensures the accountability structures that are intended by the institutional reforms.

Another critical issue with the current legislative framework is a lack of specificity. The water laws of Jordan were drafted to establish institutions, leaving much of the details of implementation to those agencies to develop through regulatory provisions. In many cases, this is thoroughly appropriate. Specific allocation quantities or water quality standards must be adapted to changing circumstances and should not require legislative amendments in order to do so. However, the principles that should guide those decisions, along with specific procedural safeguards to ensure that agency decisions are made in accordance with those principles and the Government of Jordan's policies are not fully articulated in the current sectoral laws.

Finally, and perhaps most importantly, the current legal framework does not fully reflect and support implementation of national water strategies and policies that have evolved to respond to the increasing pressures on Jordan's scarce water resources. Water law in its best form is a tool that enables and facilitates the realization of policy goals. Law creates the necessary institutional framework and authority for effective implementation, compliance and enforcement. It also provides the necessary substantive and procedural mechanisms to ensure efficiency and equity in water management and grants the government the necessary tools to adapt to changing circumstances in an accountable manner. In codifying the guiding principles and necessary incentives for sustainable use and development of the resource, water law facilitates the achievement of broader social and economic development goals.

To address these issues, an integrated and progressive set of legislative reforms is proposed. Across the world, countries are reforming their laws to facilitate more effective and integrated water management. The recommendations for legal reform in Jordan are tailored to both implement and codify the institutional reforms proposed in this Assessment and ensure that the sector's legal framework effectively supports and promotes the realization of Jordan's water policies in line with current international best practices. To achieve these reforms, two parallel sets of activities are recommended:

- Identify and implement the immediate and short-term legal and regulatory measures that must be undertaken in order to facilitate the priority reforms in the Plan of Action to be developed following this Assessment;

- Undertake a consultative process to identify the remaining gaps, overlaps, and conflicts in the legal framework that will inform the drafting of a new, comprehensive water law for Jordan. This new law will integrate and build upon the legal reform measures taken earlier and will become a coherent and effective instrument for achieving the water management goals of the Government of Jordan.

PHASE I: ADAPT EXISTING LEGAL FRAMEWORK TO ACHIEVE PRIORITY INSTITUTIONAL REFORM GOALS

Legislative drafting can be a complex and often lengthy process. While it may be ideal to focus all of the legal reforms being proposed in one, comprehensive law, it is desirable to achieve some of the recommended institutional reforms more quickly. For this reason, we propose that a series of short-term measures be undertaken in years 1-2 of the implementation phase. These will include using the delegation and reorganization authority within existing laws and by-laws to make immediate changes, followed by amendments to existing legislation, and enabling legislation to establish new organizations. These changes, and the lessons learned from implementing these measures, will be incorporated into the new framework water law that is proposed for Phase II of this reform process.

While the specific details and process for reforms to the existing legal framework will be determined in close consultation with the Ministry and other relevant agencies, the legal component of this assessment has resulted in the following initial recommendations.

As soon as the plan of action for implementation of this report is finalized, the first step will be to **use the delegation authority in Article 28 of the WAJ Law** to re-assign the necessary authorities from WAJ to the Ministry and simultaneously **use Article 5(b) of the MWI By-law to reorganize the Ministry Directorates** as necessary to enable implementation of the Ministry's new functions. This will include the necessary authority to have the PMU function as an interim Water Utilities Regulatory Commission. These immediate changes, made through a decision or decisions of the Council of Ministers, will enable the institutional reform process to begin immediately and for ISSP to be able to target technical assistance to the appropriate organization and staff under the new structure.

A second step, within years 1-2 of the project, will be to:

- Create the National Water Council through a Prime Ministerial Decree which will then be formalized by enabling legislation that will establish the Council as a permanent, legal body. The legislation will be necessary to avoid interruption of the Council's work when there are changes within the Prime Ministry.

- Formally amend the WAJ Law to codify the delegations made under Article 28 (see first step above) so that the necessary planning, management and implementation authorities are vested with the Ministry and to ensure that WAJ has the necessary authority and regulatory tools to function effectively as a bulk water supplier.

- Amend the JVA Law to legally establish Water User Associations (WUAs) as irrigation utilities in the Jordan Valley and set forth the duties and responsibilities of the WUAs and of JVA with respect to oversight of the WUAs. ISSP staff is currently providing comments on proposed amendments to this effect.

- Amend the MWI By-law to codify the restructuring and reallocation of functions among the Directorates to reflect the new authorities being delegated to the Ministry and to reflect the interim regulatory authority of the PMU.

- Amend the Groundwater By-law to move licensing authority to the Ministry and update compliance assistance and enforcement provisions.

- Pass enabling legislation to create an independent Water Utility Regulatory Commission (WURC), or incorporate this enabling legislation in the framework water law.

- Frame the legislative requirements for contract parameters and requirements that will vest utilities with operation and management authorities. This may be done in an interim manner through the amendments to the WAJ law and the MWI by-law, but should later become part of the WURC enabling legislation and/or the framework water law.

Throughout the process, it will be necessary to identify priority areas for technical assistance to the Ministry and other relevant agencies and stakeholders. For example, capacity building on compliance assistance and enforcement may take place during this phase to enhance implementation of the revised laws and regulations.

PHASE 2: UNDERTAKE A CONSULTATIVE PROCESS TO ENACT NEW, INTEGRATED WATER LAW

As noted above, the reforms that will take place in Phase I will go a long way towards alleviating several of the major shortcomings in the current water law framework. However, more comprehensive reform will be necessary to address the remaining gaps and overlaps in authority and to ensure that the laws are to appropriately support and facilitate meaningful implementation of Jordan's water strategies and policies.

To effectively put these policies and strategy into practice, as well as to strengthen compliance and enforcement, a new water law should be drafted. This new law will incorporate (either by reference or as part of the actual text of the new law) the amendments made in Phase I, enshrine the principles guiding Jordan's water policies and strategy, and provide a comprehensive set of legal tools and safeguards for achieving the goals of water sector that draw on best international practices and are tailored specifically to Jordan's needs and context.

If water law is to reflect the competing values and necessary trade-offs that are inherent in a water scarce society, a broadly consultative process will need to be undertaken to inform the drafting of the law. Such a process will ensure that water users throughout Jordanian society understand the need for new legal provisions, the role that the law plays in facilitating and implementing sound water management, and the implications of the law on their daily lives. Raising awareness and allowing competing interests to express their priorities and concerns in the drafting process also provides a forum for building understanding of the trade-offs that are necessary and diffusing misunderstandings that often create unnecessary tensions among competing users. In addition, raised awareness can facilitate the behavior changes that encourage demand management, a cornerstone of implementation. Finally, by demonstrating that the government is attempting to be accountable to public needs and priorities, a consultative process also builds trust and, in that way, facilitates compliance with the resulting law.

To carry out the water restructuring recommended as a result of the Institutional Assessment, the government will need to carry out a parallel legal reform process, which must be consultative and efficient. It must reflect both the ongoing process of institutional reform and international best practice as adapted to the Jordanian context. Based on the water sector restructuring proposed the requisite legal process is detailed below.

STEPS TO IMPLEMENT

IN YEAR ONE OF THE PROJECT:

- Coordinate with the Legal Advisor to MWI and the Legal Advisor to the Secretary General of WAJ to establish a process for: utilizing the delegation authority of the WAJ law; and the reorganization authority of the MWI By-law; amending existing laws and By-laws; and, then integrating this process into the overall legal reform process;

- Support the Legal Advisor to MWI in conducting a comprehensive legal review, including extensive consultation with relevant stakeholders;

- Begin to provide technical support and capacity building to relevant officials and stakeholders to support implementation and enforcement in priority areas.

IN YEARS 2-3 OF THE PROJECT:

- Based on the analysis and consultations described above, assist Ministry legal staff in drafting new water legislation and recommendations for regulations;

- Assist Ministry legal staff in undertaking a broad-based, consultative review of draft legislation and addressing the feedback received;

- Assist with drafting of regulations, as appropriate.

- Continue to support MWI in the process of passing new water legislation; and

- Provide technical support and capacity building to relevant officials and stakeholders to facilitate implementation and enforcement of new law.

U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

www.usaid.gov